

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE 2 Jun 2000	3. REPORT TYPE AND DATES COVERED Master's Thesis 7 Aug 99 - 2 Jun 2000	
4. TITLE AND SUBTITLE Joint Doctrine and Task Force Hawk: Lessons For the New Millennium		5. FUNDING NUMBERS	
6. AUTHOR(S) MAJ Peter L. VanDeusen, USAF			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD 1 Reynolds Ave., Bldg. 111, Rm. 123 Ft. Leavenworth, KS 66027-1352		8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/ MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSORING/MONITORING	
11. SUPPLEMENTARY NOTES		20001115 075	
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.		12b. DISTRIBUTION CODE A	
13. ABSTRACT (Maximum 200 words) This thesis seeks to determine if Joint and Army doctrine support attack helicopters in air-only operations. It focuses on Operation Allied Force and the role that Task Force Hawk was assigned. The premise being that because Task Force Hawk lacked a ground maneuver force, Allied Force was unlike any operation the attack helicopters had previously participated in. The thesis, through historical analysis, determines that there exist tensions between the Army and Air Force over the use of attack helicopters. These tensions cloud current discussion over helicopter use. Next, the thesis examines Joint and Army doctrine to determine if the task assigned to the attack helicopters had doctrinal foundation. Finally, the study examines the predeployment training, task organization, and in-country training for the helicopter crews to determine if their preparation was consistent with the requirements of the operations.			
The thesis concludes that there exists sufficient doctrinal foundation for inclusion of attack helicopters independent of ground maneuver units. Furthermore, although Army operational doctrine supports independent operations, TTPs provide little guidance for the crews in operations independent of a ground maneuver force. Finally, recognizing this fact, the thesis recommends that attack helicopter units participate in Air Force tactical level exercises such as RED FLAG to gain the experience needed for future operations like Allied Force.			
14. SUBJECT TERMS Task Force Hawk, Operation Allied Force		15. NUMBER OF PAGES 87	
		16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UL

**JOINT DOCTRINE AND TASK FORCE HAWK: LESSONS
FOR THE NEW MILLENNIUM**

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

**MASTER OF MILITARY ART AND SCIENCE
General Studies**

by

**PETER L. VAN DEUSEN, MAJ, USAF
B.S., Florida State University, Tallahassee, Florida, 1984**

**Fort Leavenworth, Kansas
2000**

Approved for public release; distribution is unlimited.

**JOINT DOCTRINE AND TASK FORCE HAWK: LESSONS
FOR THE NEW MILLENNIUM**

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

**MASTER OF MILITARY ART AND SCIENCE
General Studies**

by

**PETER L. VAN DEUSEN, MAJ, USAF
B.S., Florida State University, Tallahassee, Florida, 1984**

**Fort Leavenworth, Kansas
2000**

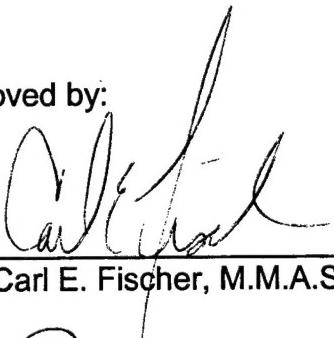
Approved for public release; distribution is unlimited.

MASTER OF MILITARY ART AND SCIENCE

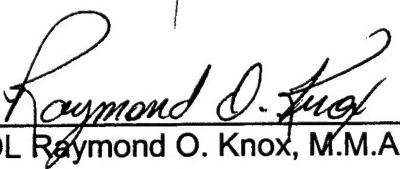
Name of Candidate: MAJ Peter L. Van Deusen

Thesis Title: Joint Doctrine and Task Force Hawk: Lessons for the New Millennium.

Approved by:


LTC Carl E. Fischer, M.M.A.S.

, Thesis Committee Chairman

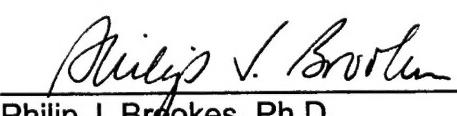

COL Raymond O. Knox, M.M.A.S.

, Member


Arthur T. Frame, Ph.D.

, Member/Member, Consulting
Faculty

Accepted this 2d day of June 2000 by:


Philip J. Brookes, Ph.D.

, Director, Graduate Degree
Programs

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

JOINT DOCTRINE AND TASK FORCE HAWK: LESSONS FOR THE NEW MILLENNIUM by MAJ Peter L. Van Deusen, USAF, 77 pages.

This thesis seeks to determine if Joint and Army doctrine support attack helicopters in air-only operations. It focuses on Operation Allied Force and the role that Task Force Hawk was assigned. The premise being that because Task Force Hawk lacked a ground maneuver force, Allied Force was unlike any operation the attack helicopters had previously participated in. The thesis, through historical analysis, determines that there exist tensions between the Army and Air Force over the use of attack helicopters. These tensions cloud current discussion over helicopter use. Next, the thesis examines Joint and Army doctrine to determine if the task assigned to the attack helicopters had doctrinal foundation. Finally, the study examines the predeployment training, task organization, and in-country training for the helicopter crews to determine if their preparation was consistent with the requirements of the operations.

The thesis concludes that there exists sufficient doctrinal foundation for inclusion of attack helicopters independent of ground maneuver units. Furthermore, although Army operational doctrine supports independent operations, TTPs provide little guidance for the crews in operations independent of a ground maneuver force. Finally, recognizing this fact, the thesis recommends that attack helicopter units participate in Air Force tactical level exercises such as RED FLAG to gain the experience needed for future operations like Allied Force.

ACKNOWLEDGMENTS

I would like to take this opportunity to thank the many people who helped, cajoled, and urged me towards completion. The first must be my wife. Without her emotional support, sympathy, and understanding I would never be able to reach my goals. She is always there to lend a helping hand if asked.

Next, I need to thank my research committee, Colonel Buddy Knox, Lieutenant Colonel Carl Fischer, and Dr. Frame. Their collective wisdom, editing skills, and patience helped me repair flaws in my logic and broaden my Joint perspective. Their critiques were always positive and helped me gain better insight into the subject.

TABLE OF CONTENTS

	Page
THESIS APPROVAL PAGE	ii
ABSTRACT	iii
ACKNOWLEDGMENTS	iv
LIST OF ABBREVIATIONS	vi
CHAPTER	
1. INTRODUCTION	1
2. ROOTS OF THE DEBATE	11
3. LITERATURE REVIEW	34
4. OPERATION ALLIED FORCE	48
5. CONCLUSIONS AND RECOMMENDATIONS	63
BIBLIOGRAPHY	71
INITIAL DISTRIBUTION LIST	77

ABBREVIATIONS AND ACRONYMS

AAA	Anti-Aircraft Artillery
AADC	Area Air Defense Commander
ABCCC	Airborne Battlefield Command and Control Center
ACA	Airspace Control Authority
AH	Attack Helicopters
ALO	Air Liaison Officer
AOC	Air Operations Center
ARFOR	Army Forces Commander
ATACM	Advanced Tactical Missile System
ATO	Air Tasking Order
AVN	Aviation
AWACS	Airborne Warning and Control System
BCD	Battlefield Coordination Detachment
BDE	Brigade
BN	Battalion
CAOC	Combined Air Operations Center
CAS	Close Air Support
CINC	Commander-in-Chief
CJCS	Chairman, Joint Chiefs of Staff
CSAR	Combat Search and Rescue
DOD	Department of Defense
FA	Field Artillery

FLOT	Forward Line of Troops
FM	Field Manual
FSCL	Fire Support Coordination Line
HE	High Explosive
ICAO	International Civil Aviation Organization
JAAT	Joint Air Attack Team
JAOP	Joint Air Operations Plan
JCS	Joint Chiefs of Staff
JFACC	Joint Force Air Component Commander
JFC	Joint Force Commander
JFLCC	Joint Force Land Component Commander
JOC	Joint Operations Center
JP	Joint Publication
J-SEAD	Joint Suppression of Enemy Air Defenses
JSTARS	Joint Surveillance Target Attack Radar System
JTF	Joint Task Force
MAGTF	Marine Air Ground Task Force
MTW	Major Theater War
NATO	North American Treaty Organization
NTC	National Training Center
NVG	Night Vision Goggles
OCA	Offensive Counter Air
OPCON	Operational Control

OOTW	Operations Other Than War
SACEUR	Supreme Allied Commander Europe
SAM	Surface-to-Air Missile
SOP	Standard Operating Procedure
TACON	Tactical Control
TLAM	Tactical Launch Attack Missile
TPP	Tactical Training Pamphlet

CHAPTER 1

INTRODUCTION

Air and ground commanders must be constantly on the alert to devise and use new methods of cooperation. . . . There can never be too many projectiles in a battle. Whether it be thrown by a cannon, rockets, or recoilless devices is immaterial. The purpose of all instruments is identical-to deluge the enemy with fire.

General George S. Patton, Jr., 1945

On 21 April 1999 the first of twenty-four U.S. Army AH-64 Apache attack helicopters arrived in Tirana, Albania in support of Operation Allied Force. The problem it appears was that these forces were not adequately prepared to fight outside of their role as members of the Army combined arms team. Since its adoption by Congress, the Goldwater-Nichols Act of 1986 has compelled the individual services to increase cooperation and adopt compatible doctrine. On the surface, there appears a solid joint mindset, however, recent events with Task Force Hawk indicate otherwise. The heart of the matter is the dissonance between the way each service trains and equips to fight and the incompatibility this causes. The bottom line being, the services come to the war with service doctrine, not joint doctrine.

This study examines the role of joint and Army doctrine and the issue of attack helicopter aviation's effective employment outside the traditional doctrinal role (i.e. without a ground maneuver force as part of the combined arms team). The study looks at the issue through the lens of the U.S.'s most recent combat action, Operation Allied Force, and the U.S. Army's AH-64 Apache deployment

in support of the conflict. (Note: Although the Apaches were the most visible Army weapon system deployed, there was other Army assets deployed to support the tasked mission. These forces were collectively known as Task Force Hawk.) This study examines the sources of friction between the two services over the issues of command and control of air assets and of targeting priorities from World War II through today. These issues are fundamental to the study of Operation Allied Force because of the institutional proclivities that develop over time. Next, I will discuss the evolution of current joint doctrine and the Goldwater-Nichols Act of 1986. Additionally, I will review joint and U.S. Army doctrine relating to attack helicopter aviation and the role envisioned for attack helicopters in a joint operation. Finally, I will examine Task Force Hawk and Operation Allied Force, and review the deployment and the challenges that arose at both the operational and the tactical levels.

Specifically, the following primary question and secondary questions are addressed.

1. Does current joint doctrine provide flexibility for employment of Army attack aviation in a joint air campaign outside their combined arms role?
2. Assuming the services follow the hierarchy of doctrine, does joint doctrine give sufficient guidance to Army doctrine to provide this flexibility and if not, what additional steps must be accomplished to increase compatibility?
3. Is there any value-added in having Army attack aviation in joint air operations or do the risks outweigh the rewards?

Importance of the Problem

It has been more than a decade since the Pentagon set out to bolster cooperation between the military services, however the plans for the AH-64 employment in Kosovo illustrates the problems in uniting the armed forces needed for this country's battles in the twenty-first century. The extensive delay from the time SACEUR, General Wesley K. Clark, sent out his request until the first Apache arrived was mired in heated debate among senior Army officials.

The pentagon's caution was certainly understandable, American lives were at stake. However, the Apache delay also illustrates the problem with current joint and Army doctrine. The preparation and precautions were so elaborate (due to the crews' unfamiliarity with the terrain, the threat array, and employment with air force packaging) they were never called into combat. If the Pentagon felt the Apaches were a good idea and merely needed the standard predeployment and spin-up time, it presumably could have pushed General Clark's request more quickly. Indeed, it appears there was a battle of immense proportions occurring within the Army ranks on the use and utility of the Apache. Current doctrine calls for the Apache to be used in concert with a ground maneuver force. This departure from doctrine (i.e. the use of the Apache as the only Army branch supporting an air only strike force or as the primary strike platform) is mired in political upheaval. Many explain the delay and inactivity as fear for not only the crews and aircraft, but also for the Apache's reputation. Had they proved ineffective in battle it might have harmed Army aviation in general and more importantly, future budget battles over funding for the AH-64D

Longbow. I believe this is only a systemic symptom of the true problem.

Although there was advance planning for the Apaches' use in Operation Allied Force by Lieutenant General John Hendrix, Commander U.S. Army's V Corps, confusion over command relationships and the Combined Air Operations Center's role still arose.

The Gulf War, on the other hand, provides a clear example of integration at the joint force air component commander (JFACC) level with an innovative employment scheme outside the doctrinal paradigm. The Apaches, although originally built to support armored formations, successfully neutralized key Iraqi anti-aircraft radar installations and command and control nodes the first night of the Gulf War. These missions cleared the way for their larger fixed-wing cousins and arguably accelerated our success with the joint force commander (JFC)'s campaign. The ingenuity of the Desert Storm campaign planners yielded substantial returns.

This innovative use of attack helicopters is even more critical if we look at the capabilities of the AH-64D Longbow. With its sophisticated radar and longer-range missiles, the utility of the Longbow to meet the JFC's objective cannot be overstated. To exclude such a capable force from the JFACC's list of available assets will effect his ability to meet the operational goals. Hopefully, the shortfalls in Kosovo will force action upon the services to come to grips with the problems inherent in doctrine. It is imperative that the services work closely as they pen not only joint doctrine, but service doctrine so future conflicts will have the synergy and massed effects needed throughout the battlefield.

Attack Helicopters

Army aviation is a resource that is integrated and synchronized with the other members of a combined arms team to create a synergism of combat power. The traditional role of Army attack aviation has been as a combat resource directly responsive to the ground commander, whose mission it is to fight the ground battle. Currently, the U.S. Army utilizes two primary airframes in the attack role, the AH-64D Kiowa Warrior and the AH-64 Apache. The AH-64 is the U.S. Army's premier attack helicopter. Its weapons include sixteen laser-guided Hellfire missiles (which can be employed at ranges of up to eight kilometers) and 1,200 rounds of 30-millimeter cannon (for the destruction of thin-skinned and air defense targets at ranges of up to three kilometers). Additionally, each of the four Hellfire missile racks may be replaced with seven or nineteen shot, 2.75-inch rocket pods. The newest version of the AH-64, the AH-64D Longbow, will replace a percentage of the Apaches in the fleet and provide increased flexibility and lethality to the user by decreasing the number of helicopters needed to accomplish the same task that the Apache does.

Limitations

Because of the sensitivity of the Apache deployment and the problems inherent in writing on a recent operation, much of the information used to analyze Task Force Hawk is limited. Wherever possible, I have confirmed data through more than one source.

Delimitations

For the purpose of this research, I will limit my discussion of joint doctrine to only that which is applicable to independent operations by Army attack aviation. The historical analysis begins with World War II and includes the Korean Conflict, Vietnam War, and the Gulf War. Although these conflicts are not all inclusive of joint and Combined operations by the U.S. armed forces, they do represent the bulk of the events that shaped each services' bias. Additionally, although the Kiowa Warrior has a substantial weapons capability, this paper will focus on the AH-64 and its missions and roles.

Key Terms

One of the problems with resolving issues between air and ground power advocates is that the same terms often mean different things to different writers. With this in mind, if practical, the key definitions listed and those defined in further chapters are defined from joint publications (JP).

Air Only Operations or Campaigns. This is not defined in either joint or service doctrine. For the purposes of this thesis, "air only" refers to the use of air forces (no distinction of service branch) as the primary military instrument to accomplish NCA or the JFC's objectives. Additionally, as in the case of Operation Allied Force, the role of the ground force is restricted to support for the air forces. Although this definition certainly has no foundation in doctrine, I believe the likelihood of air only operations will increase.

Air Tasking Order (ATO). A method to task and disseminate to components, subordinate units, and command and control agencies projected

sorties, capabilities, and forces-to-targets and specific missions. Normally provides specific instructions to include call signs, targets, controlling agencies, as well as general instructions.¹

Apportionment (air). The determination and assignment of the total expected effort by percentage or by priority that should be devoted to the various air operations or geographic areas for a given period of time.²

Fire Support Coordination Line (FSCL). A line established by the appropriate land or amphibious commander to ensure coordination of fire not under the commanders control but which may affect current tactical operations. The fire support coordination line is used to coordinate fires of air, ground, or sea weapons systems using any type of ammunition against surface targets. The FSCL should follow well-defined terrain features. The establishment of the FSCL must be coordinated with the appropriate tactical air commander and other supporting elements. Supporting elements may attack targets forward of the FSCL without prior coordination with the land or amphibious force commander provided the attack will not produce adverse surface effects on or to the rear of the line.³

Interdiction Operations. An action to divert, disrupt, delay, or destroy the enemy's surface military potential before it can be used effectively against friendly forces.⁴

Operational Control (OPCON). The authority to perform those functions of command over subordinate forces involving organizing and employing

commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission.⁵

Tactical Control (TACON). The command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed and usually local direction and control of movements or maneuvers necessary to accomplish assigned missions or tasks.⁶

Research Methodology

The methodology for this thesis is a case study on the use of attack helicopters in Operation Allied Force.

First, chapter 2 will examine the sources of friction between the two services over the issues of command and control of air assets and of targeting priorities. These issues are fundamental to the study of today's attack helicopter doctrine because they were (and still are) a constant source of tension between the Army and Air Force.

Next, chapter 3 will briefly review the history of joint doctrine from 1984 to the present, to include the Goldwater-Nichols Act, and how through lessons learned in Vietnam and Desert Storm, it was shaped to focus the services toward compatible doctrine. Additionally, I will compare current U.S. Army Aviation doctrine with joint doctrine to determine if a disparity exists between joint and service doctrine.

Chapter 4 will examine Operation Allied Force and its integration of Task Force Hawk, primarily focusing on training and equipping the Apache crews to operate in an air only campaign. The research will determine if any specialized

training was conducted to prepare the Apache force for operations resembling those in Allied Force. If they did not receive any specialized training, the research will determine how closely the training resembled actual employment of fixed-wing assets in a joint or combined environment. In addition, chapter 4 will discuss the integration requirements needed to function in the threat environment arrayed against the AH-64s. Moreover, a brief review of the roles and mission the Combined Air Operations Center (CAOC) in Vicenza, Italy would have played if the Apaches were called into combat. Finally, chapter 4 will determine how the Apache unit deployed into theater. The research will determine if the units deployed with their normal structure (to include command and control).

Chapter 5 is the analysis and conclusions of the operation. It will synthesize the summaries of the previous chapters and either validate current joint and service doctrine and training, or recommend changes to joint, Army, or Air Force doctrine and training to adapt to the role of attack helicopters in air only operations. The primary goal being, to determine if joint and Army doctrine provides flexibility for employment of Army attack aviation outside its combined arms role in a joint air campaign.

¹Office of the Chairman of the Joint Chiefs of Staff. JP 3-03, *Doctrine For Joint Interdiction Operations*. (Washington, DC: GPO, 10 April 1997), GL-2.

²Office of the Chairman of the Joint Chiefs of Staff. JP 3-0, *Doctrine For Joint Operations*. (Washington, DC: GPO, 1 February 1995), GL-3.

³Ibid., GL-4.

⁴Ibid.

⁵JP 3-0, II-7.

⁶|bid.

CHAPTER 2

ROOTS OF THE DEBATE

Introduction

Air Power is not flying artillery or jet-propelled cavalry; it is the sum of the means necessary to dominate the air. To retain its greatest asset, flexibility, the integrity of air operations must be guaranteed.

Colonel Francis C. Gideon, *Military Review*

Examining military history is not meant to provide simple or cook book solution based on past experience. What it should provide is insight to what has and has not occurred in the past. Clausewitz saw military theory and history as inextricably linked. Theory is the analytical reasoning influenced by history. Doctrine is therefore the logical output from the theory, historical analysis, and individual perspectives. With these thoughts in mind, it is imperative to examine the sources of friction between the two services over the issues of command and control of air assets and of targeting priorities. These issues are fundamental to the study of today's attack helicopter doctrine because they were (and still are) a constant source of tension between the Army and Air Force. Without a solid foundation in historical perspective, one cannot adequately define the problem nor propose qualified solutions for future operations.

World War II

The appearance of service differences over the application of air operations and its role first appeared in World War II. (Although there were numerous debates between the Army and the Army Air Corps over the effective

application of air power prior to World War II, it saw the first application of air power in a largely independent role.) Debates on topics from the need for a joint targeting process to the issue of command and control, highlighted issues that would fuel future controversy over air support to ground commanders.

Furthermore, the entering argument, from the Army standpoint, was that the Air Force's primary role was to shape the battlefield for the ground commander. However, this shaping of the battlefield was interpreted quite differently from the airman's perspective.

In 1942, FM 31-3, *Aviation in Support of Ground Forces*, was the definitive manual for the application of air support.¹ Its primary focus was on support for the corps commander. In effect this provided for and advocated that, the corps commanders have their own air force on call. This accomplished the parceling out of air power to the detriment of not only theater air superiority, but also other ground commanders who either needed more air support or had none at all.² Additionally, because the commanders were mainly concerned with shaping their own piece of the pie, ground attacks were concentrated around the forward line of troops (FLOT) rather than deeper in the enemy's rear. This attack doctrine was what the U.S. Army carried into battle in the North Africa campaigns of 1942. Many Air Force officers argued that this air support to an Army formation directed by a corps commander had limited effect and even less utility. This decentralized effort to gain and maintain air superiority over the theater of operations was ineffective. However, the most controversial lesson from the

North Africa campaigns was the importance of centralized, functional control of air power, a concept that AAF elements and the Army fought over continuously.³

On 31 January 1943, President Franklin D. Roosevelt met with Prime Minister Winston Churchill at Casablanca, Morocco. This conference, among other things, discussed the alliance's grand strategy and the problem of decentralized control of air power.⁴ It was the successful and articulate arguments of British Air Vice Marshal Sir Arthur Coningham that defined the principles of air support, in addition to wresting the air assets from the Army and giving them to an airman, General Carl A. "Tooey" Spaatz.⁵ General Spaatz became the air component commander with continuous operational control over all air assets, much to the dismay of more than a few ground commanders. These changes were embodied in a new army manual, FM 100-20, which emphasized that both air power and land power were equal and that both had significant operational level contributions to make.⁶ Additionally, the missions of air power employment were rank ordered. They were;

1. To gain and maintain the necessary degree of air superiority.
2. To prevent the movement of hostile troops and supplies into the theater of operations or within the theater (interdiction).
3. To participate in a combined effort of the air and ground forces in the battle area, to gain objectives on the immediate front of the ground forces (CAS).⁷

This restructuring of the air effort, to many a corps commander, was not only a detriment to the war effort, but also was done at great expense in both time and lost lives.

As the battle against Germany moved to France, the air component again was placed subordinate to the ground commander. As a result overall coordination of the theater air campaign was poor compared with the Mediterranean campaign.⁸ Fortunately, the air operation had earlier achieved air superiority over the skies of France and the various subordinate air commanders had good working relationships with the supported ground armies. Moreover, by this time in the war, the allies were enjoying a considerable advantage in both aircraft and pilots to the Germans. This condition facilitated the "dedicated" support of the invasion by the various air forces to both an achievable and congruous goal while meeting the air commander's objective of continuous air superiority as outlined in FM 100-20.⁹ The lessons learned in World War II and those embodied in FM 100-20 became the basis for U.S. Air Force doctrine. The Air Force position on centralized control never wavered throughout and it remains the central tenant of air power today.

Post World War II

Following the war, the Pentagon was in a battle of sorts over the coequality gained by the Air Force and the concept of centralized control of air assets. Additional debate centered over the role the Air Force would play in supporting the ground commander, with close air support (CAS) and joint targeting concerns playing center stage. The Air Force's position was that CAS

was but one mission used to shape the battlefield. In fact, the Air Force felt that CAS was subordinate to interdiction and had little effect on the overall operational objectives.¹⁰ The debate became so heated that General J. Lawton Collins, Army Chief of Staff, sought a revision to the current doctrine that gave ground commanders operational control of fighter-bombers on a scale of one air group per division.¹¹ The debate was never resolved and left behind deep-seated resentments and prejudice, which would resurface a few short years later in Korea.

Korea

At the time of the Korean invasion in 1950, the Air Force and Army had worked out a tenuous truce as to the role the Air Force would play in support of the ground commanders. What had not changed was that the theater air commander would retain control over the air assets and could assign CAS priority, although in doing so he would work closely with the ground component commander. This had certain limitations in that the overall commander could override this priority if needed. This coordination of the air effort would occur in the Eighth Army and Fifth Air Force Joint Operations Center (JOC), although the actual conduct of the effort would remain with the air component commander.¹² In theory, the JOC would serve two purposes; one was to lessen the army commanders' concerns over the issue of targeting priority and two, to shorten the CAS request bureaucracy.

At the beginning of the Korean conflict, the services did a tremendous job coordinating their efforts to support the ground units. The sheer weight of the

North Korean effort forced CAS to become the number one priority of the air effort, and rightly so. However, once the North Koreans began their retreat, this cooperation began to erode. In the Army's eyes, the Air Force's commitment to interdiction at the expense of CAS was a significant issue. Moreover, there were significant differences between the Navy and the Air Force arising over command and control issue of the services' air assets and how to properly integrate them into an effective force to support the operational objectives.¹³

Although the JOC, in theory, was supposed to lessen the debate over targeting, the issue was never resolved, with each service having a different view on what percentage of air effort is required to support the ground troops.¹⁴ The bottom line--the Army felt the Air Force was not supporting the troops in contact. The Air Force's commitment to interdiction at the expense of the Army's CAS requests was again seen by the ground commanders as a bad way to conduct the business of war. Tensions ran so high that Lieutenant General Edward "Ned" Mallory Almond, Commanding General of X Corps, summed up the Army's feelings with his efforts to organize tactical air units so there would be a minimum of one squadron for each infantry division. The Army and particularly General Almond, enjoyed operational control of Marine CAS assets and saw no reason to not have it from the Air Force.¹⁵ General Almond was convinced that the only way the ground commander would receive the necessary support was if the ground commander had operational control of those air assets.¹⁶

In contrast, the Air Force believed ground commanders, much like in the early days of World War II, focused on parcelling out the air effort to win

individual battles rather than integrating the effort to win the overall campaign.¹⁷

Major General Earle E. Partridge, the Fifth Air Force Commander, was especially critical of the Army's ability to appreciate air power. In 1951 he wrote, ". . . the destruction of a dozen tanks prior to their entry into the combat area concerns the Army less than the destruction of one tank in front of him, and for this reason the operational control of air assets should never be given to an army commander."¹⁸ Whatever tensions existed at the individual level, the Army, at least officially, seemed pleased with the coordination and support they were afforded.¹⁹

When the war ended, the services had not worked out their disagreements and many of the same lessons would be relearned a few years later in Vietnam. A major difference in the upcoming conflict however, was that the Army would no longer be exclusively reliant on the air component commander (read Air Force) to provide air support. They would have a new asset available which they would hoard--the attack helicopter.

Vietnam and Armed Helicopters

The Army first began using helicopters for transport of troops after the Korean Conflict. The Air Force for its part, strongly objected to the idea of an independent helicopter force.²⁰ Although the Air Force elevated the debate to the Secretary of Defense, Robert S. McNamara, he sided with the Army and officially incorporated the 1st Cavalry Division in 1965.²¹ Unfortunately his decision did little to settle the debate. In a tentative agreement between the two services, the Air Force gained the responsibility for fixed-wing transports and the

Army got responsibility for all helicopters, except those used for search and rescue. Additionally, this agreement gave specific missions to the Army to include supply and resupply of Army and Air Force forces in the field, and fire support to those same units.²² Although the Air Force grudgingly agreed to this perceived loss of transport capability, the prospect of armed attack helicopters taking center stage never entered the Air Force's picture.

As air operations in Vietnam began to grow increasingly hard to manage, the Air Force looked to consolidate the effort and centralize assets under a single air manager. However, there still was controversy over the mission priorities and targeting issues as well as overall command and control. In contrast to Korea, there was no theater air commander coordinating the overall air effort. CINCPAC controlled the Navy air, the Marines had de facto control of their assets, and the Army fought for and gained permanent control over their helicopters, and falling back on lessons learned from the past two conflicts, they did not want to lose these assets to the Air Force.²³ Many Army officers, having studied the lessons from World War II and Korea, looked upon the gunships as the dedicated support they couldn't get from the Air Force. The issue became increasingly convoluted with four separate air operations ongoing and a tenuous agreement as to where each could and would fly.

An additional factor coloring the debate was one of targeting. The CAS issue had still not been resolved even though numerous studies and boards had been assembled.²⁴ Essentially, the Army was arguing for decentralized control (from an air power perspective) and centralized execution- fundamentally flawed

from an Air Force view. The Army's fear was that sorties apportioned for CAS would, at the last minute, be retasked to other interdiction missions leaving the corps, division, and battalion without air support. Their fears, they argued, were justified based on past experiences.

The Air Force, for their part, argued that yes in fact, CAS sorties might be retasked unto other more lucrative targets that would have operational effects.²⁵ They argued that CAS was best concentrated from a theater perspective, even if that meant other units went without. Their fear was based in the North Africa campaigns, where air support was parceled out to corps commanders who jealously guarded their assets, to the detriment of the theater objective. They argued that chasing tactical success at the expense of operational objectives was a flawed concept.²⁶

Upon entering the conflict with their cavalry division, the Army brought with them the capability to not only air assault a ground force into a landing zone, but also prepare the battlefield and support that force if needed. By the end of the war, the Army had doubled their helicopter force with a significant number being gunships.²⁷ Moreover, the Army retained control over those assets per McNamara's decision in 1965 and the compromise worked out between the respective chiefs in 1966.²⁸ This agreement was not the end of the debate however. Although the Air Force continually requested control of the attack helicopters the requests were denied. The Army argued that the helicopters were an essential part of the ground maneuver force and therefore should remain OPCON to the corps commander.²⁹ The Army considered the attack

helicopters immediately responsive to their needs and as an additional element of firepower used to complement Army artillery.³⁰ Furthermore, all of South Vietnam was considered to be within the FSCL. This made all air operations support for the ground force and thus close air support.³¹ The Army used this as a means to continually protest the idea of a single air commander and to deny the Air Force any control over their helicopters (moreover, the Army declined to place any attack helicopter operations on the air tasking order (ATO), much to the Air Force's dismay).³² However, according to General William W. Momyer, Seventh Air Force Commander, this made air operations and air assaults considerably more hazardous. The decentralized control of air assets (to include helicopters) prohibited the ability to synchronize and integrate air power in support of the helicopters.³³ However, according to the Army doctrine of the day, airpower was viewed as a subordinate element to the ground commander with the ground maneuver forces always supported, never supporting airpower.³⁴ In fact the Army argued that its own helicopters "... much like jeeps and trucks" supported the ground commander and should be directly controlled by him.³⁵

To the Army, Vietnam justified their application of attack helicopters borne out of lessons learned from World War II and Korea, and cemented the idea that attack helicopters should be at the disposal of the corps commanders and never centralized under a single air manager. The Air Force however, viewed Vietnam differently. They felt the chaos of the air effort was vindication of the single air manager concept with theater-wide responsibility. These debates over the targeting issues took center stage, with command and control trailing a distant

second. In summary, the lessons learned from Vietnam were service specific. The Army had their dedicated CAS platforms in the form of helicopters, with the Air Force still pressing for a simple unified command structure and a single air component commander. However, all was not lost. Lessons from Vietnam would help to foster a reform of the joint system and a mandated revamping of joint doctrine in the mid-1980s. The question was, would the services take this new jointness into the next conflict?

Desert Storm

During the years between the end of the Vietnam War and Desert Shield/Desert Storm interservice differences reached an apex causing some congressional leaders to call for service and joint doctrine reform.³⁶ The product of this congressional inquiry was the Goldwater-Nichols Department of Defense Reorganization Act of 1986. This act, in part, was in response to lessons learned in Vietnam, and was seen as a way to streamline unity of command problems cited by commanders as a major limitation in their ability to prosecute a war. Moreover, the act allowed the commander-in-chief (CINC) to prescribe the chain of command and direct subordinate commands to carry out assigned missions.³⁷ In the past, these issues were subject to much interference from the services.³⁸ These new unified positions saw the services enter a period of teamwork as each saw the need for cooperation to enhance the future. Part of this change was the formal introduction of the joint force air component commander (JFACC). This concept, however, was not widely accepted within any service except the Air Force. The other services viewed the concept with

suspicion arguing that the Air Force would carry out its theater air campaign to the detriment of the Army, Navy, and Marine Corp.³⁹ For the Army, the JFACC system was a beast to be tamed. New technology had allowed the corps commanders the ability to look deep into the enemy's battlefield and identify and strike targets that once could only be hit by fixed-wing platforms, therefore leading the commanders to guard those assets that could shape his lane from the JFACC.⁴⁰ They therefore held on to the theory that air power (in the form of attack helicopters and Army tactical missile system ATACMS) should be on-call to the corps commander and not part of the ATO process.⁴¹ Because the services did not specifically address this issue of the JFACC in service doctrine, the JFC would determine the command and control responsibility and authority.⁴² This was the unified structure the services carried to the table on the eve of Desert Shield and one that would, in theory, end many of the command and control debates of the past.

Upon Iraq's invasion of her southern neighbor, Lieutenant General Charles A. "Chuck" Horner, Commander, U.S. Air Force Central Command (CENTAF), was named the JFACC and granted tasking authority over most air forces in-theater by the JFC, General H. Norman Schwarzkopf, Commander in Chief U.S. Central Command (CINCCENT). The few exceptions were tankers assigned to Strategic Air Command, and assets assigned to the 7440th Composite Wing in Turkey. However, Horner did retain TACON of those assets and all were tasked on the daily Air Tasking Order.⁴³ In short, the JFACC retained a span of control over fixed-wing aircraft that had not been seen since

the days of the World War II and well ahead of the fragmented structure that limited the options during Vietnam.⁴⁴

Although the Army did not have any fixed-wing aircraft to integrate into the ATO, their surface-to-air defenses were integrated with the fighter coverage enhancing the theater air defense umbrella.⁴⁵ The question of integration of AH-64s into the ATO never became a issue prior to Desert Storm beginning, however, there were numerous problems encountered between the Army and Air Force once the Apaches began supporting the campaign.

The issue of targeting priorities once again took center stage during the Gulf War. Against Iraq, the Air Force saw for the first time an opportunity to prove their critics wrong. They designed an air offensive that targeted the war-making capacity of the enemy and the leadership from the start.⁴⁶ However, the differences of priority with the Army were very much Clausewitzian in nature. The Army saw the "hub of all power" as the ground forces and the Air Force, for its part, saw the center-of-gravity as the leadership of Iraq and their willingness to continue the hostilities.⁴⁷ This difference led to the Army's most vocal objection both during and after the war concerning the failure of the JFACC to support the ground forces in the way of striking corps nominated interdiction targets.⁴⁸ However, the problem was not that the JFACC was ignoring the corps commanders' requests, it was that General Schwarzkopf, acting as both the JFC and the land component commander, was redirecting the targeting priorities and not keeping his corps commanders informed.⁴⁹ Additionally, Schwarzkopf's primary concern lay with decreasing the operational reserves of the Republican

Guard. Therefore all units that were determined to be below 50 percent strength were not targeted by the JFACC. Since most units that lay directly in front of the ground forces were assessed to be below 50 percent, the CINC took them off the table.⁵⁰ Unfortunately the corps commanders were never informed of this priority and they lay the blame squarely on the shoulders of General Horner.

The use of the Apaches to support the campaign began the first night of hostilities. A flight of AH-64s were used to lead an attack on Iraqi early warning sites, creating a corridor for a flight of F-117s heading into Baghdad.⁵¹ This was the first and only time the Apaches were placed on the ATO.⁵² However, the Army never considered this attack to be offensive counter air, indeed the corps commanders felt this use of the Apaches to be nothing more than a diversion of their real mission to shape the battlefield.⁵³ In fact, it can certainly be argued that many ground commanders saw this as a dangerous precedent. Should even a single Apache get shot down, the corps would lose valuable combat capability. It was this doctrinal mindset and their frustration with the perceived lack of targeting support that led the corps commanders to prevent further participation of the aviation brigades in the air operation and once the ground operations began, to send those same Apaches into territory that once was Air Force domain. (Although there were incidents of the AH-64 attacking targets before the ground war began, they were planned and directed by the ground commanders, not the JFACC.)⁵⁴

A final issue coloring the debate was the use of the AH-64s by the corps commanders to shape the deep fight. Before ground operations commenced,

the Iraq and Saudi border were both the de facto FSCL and FLOT allowing freedom of targeting by the JFACC beyond this point. Following two days of rapid advancement from the ground forces the FSCL was placed some 100 kilometers in front of the FLOT.⁵⁵ In effect this accomplished two things. First, airpower (minus the corps aviation brigade) was now restricted from attacking targets inside this line without approval of the ground commander. On the other hand, this certainly lowered the risk of fratricide from air attacks. This deep FSCL created a de facto safe haven for the Iraqi troops because the corps commanders were unable to locate, fix, and attack those targets with many of their systems and even if they could find them, it was a race to get steel on the targets. An example of this problem occurred on 27 February as Iraqi forces sped for the Euphrates River. In an attempt to prevent this mass exodus, VII Corps tried unsuccessfully to get fixed wing sorties short of the FSCL.⁵⁶

However, Horner refused to support the request for fear of fratricide.⁵⁷ This refusal was a direct consequence of another problem plaguing the operations, one in which the corps commanders wanting to attack targets beyond the FSCL, moved the FSCL forward to accommodate such strikes without coordinating with the JFACC.⁵⁸ By moving the FSCL forward, the corps staff avoided having to place the AH-64s under JFACC control. However, this severely limited where coalition air forces were allowed to fly and created confusion in the mind of the JFACC as to the exact locations of attack helicopters.⁵⁹ In the end, Schwarzkopf moved the FSCL closer to the FLOT to accommodate a more synchronized effort by the coalition.⁶⁰ Despite these

incidents, there were arguably successes from the war. The Army made extensive use of massed attack helicopters as independent maneuver elements coordinated (occasionally) with Air Force CAS and support assets, to include F-16s, EF-111s, Compass Call, and AWACS.⁶¹ Additionally, most of these joint strikes involved tactics never practiced before with little to no doctrine to guide them.⁶² (Although, from an Air Force position, many of these strikes were well outside the corps commanders' influence and decidedly an Air Force mission.) The question then becomes, why did the ground commanders establish the FSCL well beyond their capability to influence the entire area, with no planned U.S. troop movements into these areas? Besides the speed of the battlefield, FSCL positioning was the result of Army frustration over coordination measures required prior to G-day for Apache strikes beyond the FSCL.⁶³ To prevent this distraction and loss of initiative, the ground commanders established a deep enough FSCL to allow the freedom to shape the battlefield as they saw fit. However, in the attempt to seize the initiative, they increased the Apaches' vulnerability from both enemy threats and friendly air forces due to a lack of synchronization with the JFACC, and hampered the effectiveness of the coalition's overall air power.⁶⁴

Following the war, many Army officers complained about their lack of control of interdiction sorties stating that ". . . as long as targets were over the FSCL they would be included in the Air Force interdiction plan, however that meant the corps commander would get no sorties to shape the deep battle."⁶⁵ This quote highlights the major flaws in the Army's view of interdiction and fire

support. First, for the corps commanders to reap any benefits, sorties must fall under their control and second, Air Force operations beyond the FSCL do not serve the deep battle . . . patently flawed logic, but nevertheless, a philosophy that influences today's use of the attack helicopters.

A final note on the command and control debate. Following the war, the Air Force published what was to become the foundation for Air Force thought on joint operations--the *JFACC Primer*. It was published in August 1992 as a single source collection on campaign planning that harmonizes the aerospace control, and integrates the efforts of all services and components.⁶⁶ Parlaying on the lessons from Desert Storm and the new capabilities of the Army's deep assets, the JFACC would control (not command) assets to direct air support requirements in a synchronized unity of effort manner. The authors listed the assets as:

1. All USAF sorties
2. Marine sorties in excess of MAGTF ground support requirements
3. Marine sorties for long-range interdiction, long-range reconnaissance, and air defense
4. Naval air in excess of maritime air operations requirements
5. **TLAM interdiction missions beyond the FSCL** (Emphasis added)
6. **Army aviation and ATACMs interdiction missions beyond the FSCL⁶⁷** (Emphasis added)

In the document the Air Force made no mention of controlling these assets when in a direct supporting role with their respected services i.e. missions short of the FSCL, missions the JFACC (or Air Force) does not want. Instead, the point was to highlight the need for unity of command at the JFC level. Indeed, there will be times when the other component concerns directly conflict with the JFACC's and in such cases the JFC must make the tough decisions. Additionally, there may be times when those deep attack assets, instead of supporting a single ground commander, could be used in supporting the overall JFC campaign plan. Although at first glance the other services may look at the *Primer* as a consolidation of command under the JFACC, it was instead designed to provide for both unity of effort and synergy at the operational level. In recognizing that there are unique capabilities under the JFACC to organize and conduct a unity of effort in an air operation and theaterwide synchronization in today's battlefield, the premise behind the *Primer* is both doctrinally correct and operationally sound.

Summary

The objective of any military effort should always be victory. Although, since World War II, there has been a distinct difference in how the Air Force and Army views getting there. Moreover since the introduction of aircraft into the theater commander's campaign, there has been differing views on how to best employ and control those assets. The issue has become even more confusing since Vietnam, where armed helicopters were first introduced into combat. With their introduction, the ground commanders now had dedicated assets crucial in

shaping the battlefield. Additionally, with technological advancements allowing the corps commanders to see deep into the enemy's rear, the attack helicopters offer the capability to strike targets that may influence the battle in twenty-four to forty-eight hours. . . interdiction. It is this targeting debate and the fact that many Army commanders are unimpressed with the JFACC concept that has led to the insistence that army assets remain under army control and not parceled out to the JFACC. There are three conclusions that can be drawn from this review of history and its applicability to doctrine and the use of attack helicopters in an air operation. First, there is a clear difference in how each service views the targeting issue. Second, unity of command means different things to different services. Finally, there is clearly a lack of trust between the Army and Air Force over the issue of support to the ground forces that is divisive to future operations. The Army, having seen what seems a lack of support and clear breach of faith on the part of the Air Force, is reluctant to release attack helicopters to a JFACC. As much as history shapes institutional thought, it also lays the foundation for doctrine. These conclusions from chapter two, and the review of both joint and Army doctrine, will give a much clearer picture of how the Army proposed to use attack helicopters during Operation Allied Force.

¹Stephen J. McNamara, *Air Power's Gordian Knot. Centralized Versus Organic Control* (Maxwell Air Force Base, AL.: Air University Press, August 1994), 19.

²Ibid., 15.

³Ibid., 21.

⁴Richard H. Kohn and Joseph P. Harahan, eds., *Air Superiority in World War II and Korea* (Washington, DC: Office of Air Force History, 1983), 30.

⁵William R. Carter, "Air Power in the Battle of the Bulge: A Theater Campaign Perspective," *Air Chronicles*, April 1989, 32.

⁶McNamara, 20.

⁷Ibid.

⁸Ibid., 31.

⁹Ibid., 33.

¹⁰Michael Lewis, *Lt Gen Ned Almond, USA. A Ground Commander's Conflicting View with Airmen over CAS Doctrine and Employment* (Maxwell Air Force Base, AL.: Air University Press, August 1997), 30.

¹¹Ibid., 54.

¹²McNamara, 83.

¹³Michael R. Moeller, *The Relationship Between the Joint Targeting Coordination Board and the Joint Force Commander* (Maxwell Air Force Base, AL.: Air University Press, 1994), 10

¹⁴Ibid., 12.

¹⁵Lewis, 73.

¹⁶Moeller, 13.

¹⁷Ibid.

¹⁸Ibid.

¹⁹McNamara, 88.

²⁰McNamara, 100.

²¹Ibid.

²²Robert F. Futrell, *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force*, vol. 2, 1961-1984 (Maxwell Air Force Base, AL: Air University Press, September 1984), 313.

²³Thomas A. Cardwell III, *Command Structure for Theater Warfare. The Quest for Unity of Command* (Maxwell Air Force Base, AL: Air University Press, September 1984), 18.

²⁴With Vietnam clearly looming, the Army, for its part, suggested that army commanders be given OPCON over their CAS aircraft (Howze Board) all the way down to company level if needed. The Air Force countered with the notion that air assets can only be managed effectively with a single air commander (Disoway Board). McNamara, 99.

²⁵Donald J. Mrozek, *Air Power and the Ground War in Vietnam Ideas and Actions* (Maxwell Air Force Base, AL: Air University Press, January 1988), 36

²⁶John J. Sbrega, "Southeast Asia," in *Case Studies in the Development of Close Air Support*, ed. Benjamin Franklin Coolong (Washington DC: Office of Air Force History, 1990), 411.

²⁷Ibid., 107.

²⁸William W. Momoyer, *Airpower in Three Wars* (Washington DC: Department of the Air Force, 1978) 81.

²⁹Ibid., 265.

³⁰Sbrega, 454.

³¹Ibid., 445.

³²Momoyer, 265.

³³Ibid., 81 and McNamara, 107.

³⁴McNamara, 112.

³⁵Mrozek, 36.

³⁶James R. Locher III, "Taking Stock of Goldwater-Nichols" *Joint Forces Quarterly* no.13 (Autumn 1996), 10.

³⁷Ibid., 13.

³⁸Ibid., 12.

³⁹McNamara, 122.

⁴⁰ Michael R. Gordon and General Bernard E. Trainor, *The General's War: The Inside Story of the Conflict in the Gulf* (New York: Little Brown and Company, 1995), 311.

⁴¹ Ibid.

⁴² McNamara, 122.

⁴³ Ibid., 126.

⁴⁴ Ibid.

⁴⁵ Ibid., 129.

⁴⁶ Mark Clodfelter, "Of Demons, Storms, and Thunder A Preliminary Look at Vietnam's Impact on the Persian Gulf Air Campaign," *Air Chronicles* (April - June), 4.

⁴⁷ Clausewitz in his book, *On War*, defined the Center of Gravity as "the hub of all power and movement, and one on which everything depends . . . the point against which all energies should be directed."

⁴⁸ McNamara, 129.

⁴⁹ Moeller, 23.

⁵⁰ Ibid.

⁵¹ Gulf Air Power Survey Volume IV, Weapons, Tactics, and Training and Space Operations (Washington, DC: 1993), 172.

⁵² Ibid.

⁵³ McNamara, 129.

⁵⁴ Ibid.

⁵⁵ Mark J. Eshelman, Air Commander Control of Army Deep Fire Assets (School of Advanced Military Studies Monograph, United States Army Command and General Staff College, Ft. Leavenworth, KS, 1993), 28.

⁵⁶ Ibid.

⁵⁷William F. Andrews, *Airpower against an Army Challenge and Response in CENTAF's Duel with the Republican Guard* (Maxwell Air Force Base, AL: Air University Press, February 1998), 66.

⁵⁸Gulf Air Power Survey, 315.

⁵⁹Ibid.

⁶⁰Ibid.

⁶¹Ibid., 306.

⁶²Ibid.

⁶³Eshelman, 25.

⁶⁴Ibid., 26.

⁶⁵Daniel P. Leaf, *Unity of Command and Interdiction* (Maxwell Air Force Base, AL: Air University Press, July 1994), 76.

⁶⁶Ibid., 81.

⁶⁷Ibid., 82.

CHAPTER 3

LITERATURE REVIEW

Introduction

At the heart of war lies doctrine. It represents the central beliefs for waging war in order to achieve victory. . . . It is the building material for strategy. It is fundamental to sound judgment.

General Curtis E. LeMay, USAF

By their very nature, large organizations have a built-in resistance to change. Institutions find it difficult to adapt to changing conditions because of understandable attachments to the past. The very foundation of each service rests in imbuing its members with pride in its past, mission and doctrine. While these service distinctions are important in fostering a fighting spirit, cultivating them to the exclusion of other ideas engenders tendencies to look inward and to insulate the institutions against outside challenges. The U.S. military's JP 1-02 defines doctrine as, "a body of fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application."¹ Joint doctrine gives the services a guide for conducting operations, while also setting the direction for service doctrine and organizational structure and training. This chapter will review Joint and U.S. Army doctrine relating to attack helicopter aviation and the role envisioned for attack helicopters in a joint operation.

Doctrine Fundamentals

Much of the current joint doctrine we use today has its foundation from the lessons learned in past conflicts. The lessons from the Vietnam experience certainly had a large role in the formulation of that doctrine. In the Autumn 1996 *Joint Force Quarterly*, General David C. Jones, USAF (Retired), CJCS 1979-1982, discusses the many dysfunction's of the joint system prior to the passing of the cornerstone document that is the foundation for how we go to war today . . .

. the Goldwater-Nichols DOD Reorganization Act. During the Vietnam conflict there was a real tendency to insulate each service from the other, which produced unclear responsibilities and confused objectives.² This was a product of distrust, misrepresentation of capabilities, and political expediency on the part of the services. Each service, instead of integrating and synchronizing its efforts, “. . . considered Vietnam its own war and sought to carve out a large mission for itself.”³ One example, “Is that each service fought its own air operation, agreeing to only limited measures for coordinating airspace.”⁴ This lack of integration led to redundant targeting and missed opportunities by the operational planners because buffers zones were built into the system and the general distrust between the services led to no synchronization on the part of the operational-level planners.⁵ Although certainly not the sole reason for the dramatic changes that came about in the form of the Goldwater-Nichols DOD Reorganization Act of 1986, the Vietnam experience certainly added fuel to the service cooperation debate raging.

In 1985, after several years of trial and error on the services to impart jointness towards its operations, Congress felt obliged to conduct its own investigation into the DOD and the command and control measures it utilized in peace and war. In the following months the Senate Armed Services Committee report on the organization and decision-making procedures of the Department of Defense (DOD) identified “poorly developed joint doctrine” as one of the nine major symptoms of inadequate unified military advice.⁶ This report went on to say that “the joint operational effectiveness of military forces is dependent upon the development of joint doctrine and sufficient joint training to be able to employ effectively.”⁷ Armed with this information, Congress implemented vast changes in the DOD through the Goldwater-Nichols Department of Defense Reorganization Act of 1986. This legislation, among other things, required the chairman to develop “doctrine for the joint employment of the armed forces.”⁸ The chairman through a series of mandates incorporated the new responsibilities through JCS Publication 2.⁹ Included in the change was the requirement for all changes to be approved by the Joint Chiefs and for service doctrine to be consistent with joint doctrine.¹⁰ The bottom line being, the act was passed to increase attention to strategy formulation and contingency planning and to provide for the more efficient use of defense resources, creating a more appropriate balance between joint and service interests.

Although there appears sufficient guidance, there are several factors inhibiting the joint doctrine development process. They include; a question of

who should write the doctrine, the coordination process that dilutes the doctrine, simultaneous development of service doctrine which have individual service bias and parochialism, and lack of consensus on key terms.¹¹ Unfortunately, these factors, in essence, weaken joint doctrine giving no clear direction to the services on how to shape their doctrine. Thus causing several disconnects between the intent of joint doctrine and what is written in service doctrine. This problem has a direct impact on the role of attack helicopters in an independent role.

Joint and Service Doctrine Comparisons

The work required to establish the intellectual foundation for equipping the JFC and his subordinates with the framework required to make informed choices is difficult at best. Since joint warfare is team warfare, joint doctrine must provide a cornerstone for building trust within the team, and offer a common perspective from which to plan and operate. Bottom line . . . joint doctrine is used to:

1. Guide the joint employment of joint forces.
2. Provide the national position for multinational doctrine consistent with existing security procedures.
3. Provide a basis for joint training.
4. Provide instructional material for the military education system.¹²

In answering the thesis question, it is important to point out that one of the in-going assumptions is that there will be no ground maneuver force for the attack helicopters to coordinate, integrate, or synchronize with. However, in the event of a ground force, that ground force would initially act as a supporting arm

to the air operations, much like the ground force was in the opening days of the Desert Storm air operation.¹³ Although it can be argued that the Army never envisioned an attack helicopter unit independent of a ground force, both joint and Army doctrine certainly allow for the possibility.

The bulk of the information and guidance is found in five publications:

1. JP 3-0, *Doctrine for Joint Interdiction*
2. JP 3-56.1, *Command and Control for Joint Air Operations*
3. JP 5-0, *Doctrine For Planning Joint Operations*
4. U.S. Army 1-111, *Attack Helicopter Brigades*
5. U.S. Army 1-112, *Attack Helicopter Operations*

(Conspicuously excluded is JP 3-09.3, *Joint Tactics, Techniques, And Procedures For Close Air Support (CAS)*--this is done intentionally. The reason being, CAS doctrine is intentionally ground forces centric and does not discuss CAS operations independent of maneuver forces.) Although these publications are not all inclusive of joint air operations, they are the most applicable to the discussion. Additionally, there are three main points that are key to the argument and to all three publications. These points are, the missions the military forces conduct, the organization for conducting them, and the training required to conduct them.

The first of these points is the mission that the forces can conduct. JP 1-01 gives a list of missions that air forces can be asked to accomplish. They include; strategic attack, offensive counter air (OCA), interdiction, J-SEAD, and

CAS.¹⁴ Additionally, the publication makes no distinction to the type of platform that can accomplish these missions, which certainly leaves the door open for the inclusion of all assets. However, I will limit the discussion to OCA, interdiction, and J-SEAD. (Although it is conceivable that attack helicopters could be used in a strategic attack role, OCA, interdiction, and J-SEAD are uniquely suited to attack helicopters due to their capabilities, weapons loadouts, and tactics.)

JP 3-0, *Doctrine for Joint Interdiction Operations*, focuses on the overall war effort. It provides guidelines for planning, synchronizing, and integrating joint air and ground operations in warfare (both MTW and OOTW). According to JP 3-0, “the synchronization of surface maneuver and interdiction is an important factor in any operation.”¹⁵ Fortunately, both JP 3-0 and FM 1-100 define attack helicopters as maneuver forces because they can occupy territory (although arguably only for a short amount of time). Moreover, the publication specifically provides for the inclusion of attack helicopters in the interdiction effort by stating that “. . . they (attack helicopters) provide a commander with an effective and versatile means of interdicting enemy forces.”¹⁶ Additionally, JP 3-0 clarifies who is responsible for the interdiction effort “. . . the JFACC, as the supported commander for the overall interdiction effort (when designated), is responsible for ensuring unity of effort for execution of JOA-wide interdiction.”¹⁷ The publication also outlines the specific responsibility of the JFACC to include; deconfliction, coordination, control measures, and adjustments to the theater wide interdiction effort.¹⁸ Finally, JP 3-56.1, *Command and Control for Air*

Operations, stresses the need for control and integration of both fixed-wing and rotary-wing assets on the ATO.¹⁹ The goal being, that through a coordinated and connected series of missions and attacks, the JFC achieves the interdiction objectives. (This command relationship is important specifically during the review of Operation Allied Force and for recommendations to future contingencies.) The use of attack helicopters in an interdiction role certainly seems logical given the goal interdiction is supposed to accomplish (operations conducted to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces). However, the missions of OCA and J-SEAD are bit more convoluted because of the inherent air flavor they have, but attack helicopters certainly can play a role.

Although OCA or interdiction is not specifically spelled out in either FM 1-111 or FM 1-112, the information on deep operations and Joint Air Attack Team (JAAT) operations do allow for the possibility of independent air attacks. Although JAAT appears CAS centric, the concept of combined assets and procedures are quite similar to those of OCA and interdiction missions. FM 1-112 defines a JAAT operation as "a synchronized, simultaneous attack by attack helicopters, CAS, and FA against an enemy force."²⁰ Moreover, although doctrine appears to refer to JAAT as an additional duty or mission, it could easily be fashioned into a primary mission with additional guidance.

Finally, the FM specifically references the possibility for autonomous operations, ". . . attack helicopters operate either as an integrated member of the

combined arms team that reinforces ground maneuver units or as an independent force.²¹ In either case, the JAAT is used to support the JFC's operational objectives.

The second main topic to cover is in the area of training for joint operations. JP 1-01 states, "Forces on land, at sea, and in the air now reinforce and complement each other more than ever . . . the pace of events in the modern world have accelerated. Joint teams must be trained and ready prior to conflict."²² This belies the "come as you are" reality of future conflicts. The joint publications do not give many specifics about training together; one, to give the services as much leeway as possible in training their forces and two, because it is not really the charter of the joint staff to dictate training dollar expenditure to the services. On the other hand, the joint staff and the CINCs can steer the training direction by sponsoring exercises that require certain specificity in training and organization.²³

Although FM 1-111 and FM 1-112 discuss independent attacks by helicopter units, the FMs give no clear guidance on how this is to be accomplished. (However, there is certainly a precedent with the Apache strikes during Desert Storm.) Additionally, FM 1-100, 1-111, and 1-112 refer to attack helicopter operations as synchronized with and controlled by a ground maneuver commander, giving little to no additional guidance on how to integrate with the air forces.²⁴ This seeming break of Army doctrine from Joint doctrine appears to fall along command and control lines that the services have been grappling over for

years. Although the considerable amount of information on training for CAS and JAAT could be used for other stand-alone missions, the fact is, the doctrine devotes little to operations independent of a ground force.

The final topic for review is that of the organizational structure for the accomplishment of the joint air operation. JP 3-56.1 outlines the command relationships for air operations and the airspace control measures. As has been previously discussed, the JFACC is responsible for the air effort and, if appointed, the Airspace Command Authority (ACA). The ACA is responsible for "developing, coordinating, and publishing airspace control procedures and for operating the airspace control system in the AOR or JOA."²⁵ This appointment of an ACA is simply an additional safety measure built into the system due to the large volume of air traffic and the limited airspace. Moreover, there are numerous examples of fratricide that could have been prevented had there been a single air manager and a robust, integrated airspace control system in-place. (The UH-60 Blackhawk shootdown in Northern Iraq provides one such example. Although at the time of the shootdown there was a single air manager, the helicopters did not appear on the ATO, nor did the Blackhawk pilots keep the airspace control authorities informed of their flight plans.) Furthermore, JP 3-56.1 also gives an adequate explanation of the Joint Air Operations Center (JAOC), which is the fully integrated facility used to fulfill all of the JFACC's responsibilities.²⁶ Included in the JAOC is the Battlefield Coordination Detachment (BCD). The BCD is the Army's link to the air effort and provides a

conduit between the land forces and the JFACC. The FMs, for their part, do not discuss the possibility of the JFACC having OPCON or TACON of the attack helicopter force, and in fact, FM 1-112, Table 2-1. Possible ATKHB command relationships, doesn't mention the JFACC at all.²⁷ In fact, although the JFACC is the controlling authority for air operations, as outlined in JP 3-56.1, there is little discussion of the air tasking order (ATO) process and air operations center (AOC) functions in FM 1-112.²⁸

Summary

Prior to Operation Allied Force, attack helicopters were not part of a large air only operation. Although they have been recently involved in large joint military operations like Desert Storm, they were always part of the Army's combined arms team. In fact, even though attack helicopters were involved in many MOOTW and peace operations and operated independently of a ground force, they were never considered stand-alone assets.²⁹ On the other hand, Army Aviation doctrine, although offering the possibility of attack helicopters in an independent role, offers very little detailed guidance on how helicopter units are to integrate within the ATO. Unfortunately, joint doctrine does not specifically address the inclusion of attack helicopters in "air-only" missions such as OCA and strategic attack, although their inclusion in these mission types is certainly feasible given the strategic environment today. Both FM 1-111 and FM 1-112 give a fairly detailed discussion of the requirements for JAAT, but the use of attack helicopters independent of the ground maneuver force is not discussed in

terms of training and organization. Therefore, the problem is not one of insufficient higher level doctrine, but one of inadequate TTPs and training and equipping the force for missions independent of a ground force. This factor is one that must be addressed at the highest levels of command because of the limited time and resources available to the attack aviation units. In order for the units to become efficient and comfortable throughout a wide range of "air-only" missions, they must spend considerably more time training for those missions, a task that will certainly take time from their primary role as a member of the combined arms team.

A final observation is one, in which Army doctrine gives no credence to the JFACC having OPCON or TACON authority over the helicopters, although it would certainly seem logical during air-only operations. What this creates is a redundant chain of command for the operation, which was exactly the condition that appeared in Albania with Task Force Hawk. Army Lieutenant General John Hendrix, who also commands the U.S. Army's V Corps in Germany, commanded the 3,300-soldier unit.³⁰ The task force's chain of command ran from Lieutenant General Hendrix directly to General Clark, skipping the JFACC completely. So in reality, should the Apaches have been called into combat, a rather tenuous position would have been created for both the JFACC and the task force commander with regards to helicopter tasking and packaging. A direct consequence of convoluted command and control lines and a clear legacy of historical lessons learned.

The reason for studying Joint and Army doctrine was to answer the question; is the doctrine adequate for attack helicopter inclusion in an air only operation? The answer appears to be yes. Although the need for joint integration and synchronization is certainly a debatable topic based on limited training dollars and time, the point is, joint operations are a necessity for the future and each service must nest their doctrine to Joint doctrine. The bottom line being, the ability to listen, synthesize, and direct movement through the air based on fleeting bits of information from numerous sources (JSTARS, AWACS, ABCCC and othes) is a daunting task even for the seasoned aviator. To accomplish these tasks with only rudimentary skills and little to no guidance from doctrine is asking a great deal from our crews. It was this dilemma that awaited the Apache crews and commanders once the order was given to deploy in support of Operation Allied Force.

¹Office of the Chairman of the Joint Chiefs of Staff, Joint Publication 1, *Joint Warfare of the Armed Forces of the United States* (Washington, DC: GPO, 10 January 1995), I-3.

²Jones David C, "Past Organizational Problems," *Joint Force Quarterly*, Autumn 1996, 24.

³Ibid.

⁴Ibid

⁵John R. Locher III, "Taking Stock of Goldwater-Nichols" *Joint Force Quarterly*, (NDU Washington, DC: Autumn 1996, no.13), 12.

⁶Ibid., 11.

⁷Ibid., 12.

⁸Ibid.

⁹Ibid.

¹⁰Office of the Chairman of the Joint Chiefs of Staff. JP 1-01c1, *Joint Publication System Joint doctrine and Joint tactics, Techniques, and Procedures Development Program*. Change 1 (Washington DC: GPO, 14 September 1993), I-3

¹¹William F. Furr, "Joint Doctrine Progress, Prospects, and Problem" *Airpower Journal* (Air University, Maxwell AFB AL: Fall 1991, vol. 5, no 3), 37.

¹²JP 1-01; I-1.

¹³McNamara and Andrews both argued that the Iraqi Army was "fixed" by the mere presence of a coalition ground force. Thus allowing the air operation to exact both physical and psychological damage to the front line forces. This was further reinforced during the Kafji raid when the better part of the Iraqi forces were decimated by air power (to include Apaches).

¹⁴JP 1-01; I-2.

¹⁵Office of the Chairman of the Joint Chiefs of Staff, JP 3-03, *Doctrine for Joint Interdiction Operations* (Washington, DC: GPO, 10 April 1997), IV-4.

¹⁶Ibid., V-5.

¹⁷Ibid., III-1.

¹⁸Ibid.

¹⁹Office of the Chairman of the Joint Chiefs of Staff. JP 3-56.1, *Command and Control for Joint Air Operations* (Washington, DC: GPO, 14 November 1994), vii.

²⁰U.S. Army. FM 1-112, *Attack Helicopter Operations*. (Washington, DC: GPO, 2 April 1997), 3-69.

²¹Ibid.

²²JP 1-01, VI.

²³Interview with Admiral Gehman, CINC Joint Forces Command. Admiral Gehman's position is that the Joint Staff should not dictate what he considers

tactical training. That said, however, he also believes that Joint Forces Command has a responsibility to train the forces (Army, Navy, Air Force, and Marines) to not only meet current threats, but also future threats and challenges. With this endstate in mind, he does advocate that all available forces be made available to the supported commander (emphasis by author) with the appropriate level of command given to that supported commander. This assumes, of course, that the commander has asked for those forces and can support those forces if need be.

²⁴FM 1-100 and FM 1-111 in their discussion of Army aviation, refer to joint operations, but only in the light of those forces continuing to operate as part of the Army forces to a unified command, a specified command, or as part of a subordinate joint force.

²⁵JP 3-56.1,II-4. The publication further amplifies the deconfliction measures in place, to include the integration of all activities of all users of airspace (including fixed and rotary-winged aircraft). Additionally, the publication reinforces the notion that just because the JFACC is the ACA, it does not imply that he has OPCON or TACON over any air assets, that is a different distinction and one which is the sole responsibility of the JFC to designate.

²⁶Ibid., II-8.

²⁷FM 1-112; 2-7.

²⁸U.S. Army, FM 1-111, *Aviation Brigades* (Washington, DC: GPO, 27 October 1997), 4-3 through 4-7,gives a good overview of both the ATO process, and also the various organizations in the AOC used to prosecute an air operation.

²⁹However, joint publications for MOOTW do require that all rotary-winged aircraft appear on the appropriate air tasking order and monitor a common frequency. Therefore, precedence is set for their inclusion in an ATO and the ATO planning process.

³⁰Although a unit this size would have normally been commanded by a colonel or brigadier general, some argue Hendrix was chosen because he could have readily commanded a ground force if necessary.

CHAPTER 4

OPERATION ALLIED FORCE

I would put the Task Force Hawk pilots and commanders up against anyone.

Brigadier General Cody, Testimony to Congress

Introduction

There are many advantages to using attack helicopters deep. One advantage is range with respect to which the AH-64 is limited only by fuel capacity and flight time. In fact, during Desert Storm, Apaches were able to attack an Iraqi armor brigade 250 miles behind enemy lines.¹ (Of course, this required forward refueling points, an advantage that may not be available in a more lethal threat environment.) A second advantage is the many missions the AH-64 can perform, J-SEAD, CSAR support and others, thus decreasing the burden to fixed-winged aircraft. A final advantage is the accuracy of the attack helicopter fires. Targets are under observation by both scout sections and, in most cases, by the attacking pilot. Because fires are observed, rounds can be adjusted quickly to compensate for a first round miss.² These advantages were just a few of the reasons that General Wesley K. Clark requested an attack helicopter unit deploy in support of Operation Allied Force. This chapter will review this deployment and the challenges that arose at both the operational level and the tactical level.

Weeks after their deployment was trumpeted by NATO, AH-64 attack helicopters arrived in Albania to what would prove a long and difficult several

months. Never before in their thirteen-year history have the Apaches gone into extended warfare without advancing ground troops in close proximity. Unlike Desert Storm or Bosnia, the aircraft would not be used as part of a combined arms team. In fact, there was no ground maneuver force to integrate with at all--this operation would be new for everyone involved.

What led to General Clark asking for the Apaches in the first place? A fundamental factor was that General Clark viewed the Serbian forces within Kosovo as key to the capitulation of the Yugoslavian government.³ With hellfire missiles, 2.75-inch rockets, and a 30-millimeter cannon, the Apache is a picture of sheer lethality. Its intimidating presence in Bosnia and its deadliness in Iraqi speak volumes about the aircraft's capabilities. It was this record in peacekeeping and war that led General Clark to call upon the Apaches of the 2-6 and 6-6 U.S. Cavalry Aviation regiments, based in Illesheim Germany, for a more practical solution to the Serb ground forces carrying out the ethnic cleansing in Kosovo.⁴ Another factor was that it was not practical for many of the fixed-wing assets participating in Allied Force to carry out the type of plan that General Clark envisioned.⁵ Flying at altitudes and speeds to avoid many of the ground-based threats made identifying and targeting dispersed enemy tanks and trucks rather difficult.

Lieutenant General Michael C. Short, Combined Forces Air Component Commander (CFACC) for Operation Allied Force, viewed the plan with some trepidation. In order for the fixed-wing aircraft to be effective, they would have to

descend to altitudes that would place them at considerably more risk. Without U.S. troops in contact with the enemy, Lieutenant General Short was an unwilling participant to the plan.⁶

A final issue was one of weather. Because the weather in the Balkan's is volatile at best, there were numerous fixed-wing sorties canceled or delayed. General Clark viewed the Apaches as the platforms that could bridge the weather gap and continue the pressure on the enemy forces, while providing relief for the Kosovar civilians.⁷ Faced with enemy forces that seemed immune to the best efforts of the air forces and the effects of bad weather on the sortie count, General Clark requested from the Joint Chiefs of Staff, and eventually received, the 24 AH-64s and support forces of Task Force Hawk.

Integration Challenges

The integration of attack helicopters into an air only operation is not just a doctrinal challenge. There are also several institutional barriers clouding the issue. The deployment of Task Force Hawk was no exception. Preceding the deployment of the aviation units to Albania, Army planners and pilots arrived at the Combined Air Operations Center (CAOC) in Vicenza, Italy to establish liaison with the CFACC and his staff.⁸ In addition to learning the inner workings of a CAOC, their mission was also to integrate the Apaches into the existing ATO process as seamlessly as possible.⁹ During informal talks with both Army and Air Force planners and aviators, it appeared that there were several misperceptions about the AOC and the ATO process from the Army side, and

the Apache requirements from the Air Force side. One of the first problems to surface was the 72-hour ATO planning process. The Air Force solution to the AOC/ATO Apache integration process was to gradually "work" the Apaches into the ATO.¹⁰ This process would ease the transition from mission orders to air tasking orders for the Apache crews, while educating the Army staff on joint forces capabilities and the Air Force staff on the Apache's requirements.¹¹ Although this helped the formal planning process, it accomplished little to ease the Apache pilots' perceptions of rigidity in the system.

A common viewpoint with many of the deployed Apache pilots was that the ATO was both rigid and impractical for their use.¹² Most of the crews were accustomed to operating in a fluid environment, with "mission-type" orders, against targets of opportunity. In a telephone interview with Major John Quackenbush, a planner with Task Force Hawk, he stated that during many training exercises, he would be given target updates four to five hours before strikes. He felt that the ATO was just not accommodating enough for these types of targeting updates and rapid, fluid operations.¹³ This type of targeting was (and still is) representative of the bulk of their flying training time pre-Allied Force.¹⁴ Fortunately, the perceptions of the ATO are more cultural than absolute. The ATO, although planned seventy-two hours prior to execution, is continuously updated. When queried as to the level of education he was given on the ATO process and the CAOC structure, MAJ Quackenbush responded, "none."¹⁵

The Air Force, following the Gulf War, recognized the need to streamline the ATO process and provide mechanisms within an AOC for the timely updates of targets and missions. The AOC was divided into four divisions; the strategy division, combat plans division, combat operations division, and air mobility division. The combat plans division is responsible for the formal planning and building of the ATO. With the finished product pushed to the units usually twelve to twenty-four hours prior to execution. Once the ATO is sent to the units, responsibility for changes to missions and targets are handled by the combat operations division. (For Army units, coordination with the CFACC and integration in the ATO planning process is handled via the Battlefield Coordination Detachment (BCD).

The BCD is primarily an AOC liaison element between the CFACC and the Army forces commander (ARFOR) or the joint force land component commander (JFLCC). In the case of Allied Force, the BCD was responsible for not only the coordination between the CFACC and Lieutenant General Hendrix, the Task Force commander, but also coordination requirements for the Apaches.)¹⁶ As an additional level of support, unit liaisons operate within the AOC. They are the subject matter experts on tactics and support requirements for their airframe or area of responsibility. Among its many duties, the combat operations division also has the capability to rapidly update the ATO, while periodically sending updates to all units and agencies referenced in the ATO.¹⁷

For emerging targets (those that Major Quackenbush referred to), the AOC uses a Time Critical Targeting Cell. Their mission is to process rapidly, developing targeting updates, while determining the feasibility of striking those targets. Following coordination with the various unit liaisons and the Chief of Combat Operations, the cell will recommend to the CFACC applicable units to strike the targets and coordinate support for those strikes. When asked when he had been informed about these specific AOC capabilities and the ability to handle the rapid targeting updates, Major Quackenbush stated he was never given any AOC brief and it wasn't until much later in the deployment that they (the task force planners) had a solid grasp of the AOC structure and ATO's flexibility.¹⁸ Furthermore, Major Quackenbush stated that although the AOC claimed the ability to rapidly process emerging targeting data, his experience was that the emerging targets the task force passed to the AOC, many times, were ignored.¹⁹ When queried as to the overall support the AOC provided, Major Quackenbush stated that he felt the ATO and the AOC was a great tool for coordinating flights and airspace, but that was about all.²⁰

One final thought on the ATO timeline. FM 1-112 in its discussion of pre-planned independent strikes, concludes that strikes, independent of a ground maneuver forces, should normally be planned twenty-four to forty-eight hours out to allow for adequate synchronization with supporting elements.²¹ Therefore, although at first glance the ATO appears cumbersome and unresponsive, the Apache planning cycle and the ATO planning cycle are actually quite

complimentary. What this leaves, in conclusion, is that although on the surface mechanisms are in place for a smooth and seamless integration, there still exists a vast chasm between the Army and Air Force over what the ATO is supposed to accomplish and how the integration process actually occurs.

A Matter of Command

From as far back as the Vietnam War, there has been a reluctance to place Army assets on the ATO and transfer command of those assets to anyone other than an Army commander--Operation Allied Force was no different. In theory, and based on doctrine, Lieutenant General Short, as the CFACC, was responsible for the conduct of the air operation, however, between the task force and the CFACC, there was never a formal command relationship established. This situation led to a most tenuous situation between the two organizations, with the eventual sending of message traffic between the Apache unit's air liaison officer (ALO) and the Air Force.²² In the message, the ALO complained of Lieutenant General Hendrix's unwillingness to place the Apaches on the ATO for fear of losing control of the assets and because the ATO "tied his hands."²³ The message's author was convinced that Lieutenant General Hendrix's desire to keep the helicopters off the ATO was fundamentally based on a mistrust of the CFACC concept.²⁴ The General was finally convinced of the efficiency of the ATO to incorporate last-minute changes and that the ATO gave the helicopters visibility to the support assets that need planning information.²⁵ This situation clearly points to a command and control relationship problem that JP 3-56.1, at

least in theory, is supposed to prevent. Had there been an established line of command and control, this barrier to integration would have been avoided.

In an *Inside the Army* article, General Jack Keane, USA Vice Chief of Staff took a dim view of the current Army thinking on command relationships.²⁶ General Keane's view was that the Apaches assigned to Task Force Hawk were assets like any other that the CFACC could and should task. Additionally, the Task Force, absent of any ground maneuver forces, was not the supported component, but the supporting component.²⁷ His mantra was one of unity of effort and safety for the crews. General Keane felt the communication links and the ability of other airborne assets to both monitor the Apaches and update the crews provided a level of safety far exceeding any pitfalls.²⁸ Additionally, the general felt that in order to achieve success in the campaign, the units must work together. Having two separate organizations with unclear lines of command was divisive to that goal and was against the Task Force's best interests.²⁹

An Issue of Equipment

In a memo to then incoming Army Chief of Staff General Shinseki, Brigadier General Richard A. Cody, assistant division commander of the 4th Infantry Division, concluded that the equipment that the Apaches were flying with, was inadequate for the Kosovo environment.³⁰ (Because General Cody planned and led the first Apache strikes of Desert Storm, his opinion was taken seriously.) His assessment was that the Apache's radios did not have the range needed for deep attacks, ". . . to make the missions work Task Force Hawk

would have to rely on communication links inside other aircraft.³¹ To correct the problem General Cody concluded that the Army must relook at both their command and control requirements and the radio suites the Army was fielding to insure that ". . . attack aviation assets have the voice links and the digital capabilities needed for all deep strikes participants, including unmanned aircraft and all command and control assets."³² Additionally, General Cody was concerned about survivability of the Apaches, noting that the aircraft survivability equipment was not reliable enough for the expected enemy threat array.³³ (The Apaches rely heavily on maneuver, J-SEAD, and jamming equipment to prevent enemy surface-to-air engagements.)³⁴ He also noted that many of the Apache pilots had lost confidence in some of the (onboard) jamming equipment and were unsure of the capabilities of the other SEAD assets available.³⁵ Although the memo was written after the operation had concluded, much of the same limitations were addressed prior to the deployment, with preparations made to compensate for the equipment and educate the crews prior to their arrival in Albania.

A further obstacle was that for the Apaches to be at their best, the enemy must leave their dug-in positions and relocate. This relocation is typically forced by a ground maneuver unit. It is during this relocation that the Apaches are at their deadliest. However, there was no ground force to force the enemy troops to move, so the Apaches would be required to perform their mission as a

hammer without the anvil of a ground force. This factor would shape much of the pilots' pre-deployment training.³⁶

The Training Plan

Major Quackenbush, in discussion of his pre-deployment training, stated that the pilots received about six days of night vision goggles training and ICAO training.³⁷ In fact, those individuals augmenting the aviation unit from Ft Bragg, received no training on Operation Allied Force ATO cycles, rules of engagement, or airspace control measures.³⁸ (He did receive, however, ICAO recertification and the 11th Aviation Brigade SOPs.)³⁹ There was very little discussion, and no training, on integration with a fixed-wing package. He stated that although many of the pilots had flown in missions independent of a ground force, the tactical level doctrine (TTPs) to do so just wasn't there for guidance.⁴⁰ They had little to no experience integrating with all the fixed-wing assets that would be supporting the Apaches on a typical strike mission and he felt that their lack of consistent joint training was a problem.⁴¹ The bottom line, his training was nothing more specific than any pilot would receive at Fort Benning when activated as an individual augmentee going to a high threat area of operation.⁴²

Once the unit deployed to Albania, the unit conducted sixteen training missions to prepare the pilots for the rigors of flying in this environment. Although, in an interview Major General Cody stated that after five mission rehearsal exercises, the crews were considered ready for combat.⁴³ Although much of the press critiqued both the length of time it took to deploy the force and

the train-up once the Apaches arrived in Albania, the fact is, it was not only necessary for the pilots, but the CAOC staff as well. The pilots' training was demanding and focused on night flying under blackout conditions in the mountains around Albania.⁴⁴ Additionally, as pointed out earlier, there was a significant Serbian threat between the Albanian and Kosovo border. This threat would necessitate the need for careful coordination between the artillery, fixed-wing J-SEAD, surface and airborne command and control assets, and the Apaches. In addition, as was stated by Major Quackenbush, the pilots just did not have a lot of experience flying without a ground force to fix the enemy. In fact, all of his Warfighter exercises and National Training Command rotations revolved around force-on-force attrition warfare with only a cursory focus on the rest of the joint air operation.⁴⁵ The reliance on other platforms to perform what had traditionally been a surface force role was new and required practice. FM 1-112 stresses the point that the helicopters do not fight alone (fundamentally different than independent), but the support packaged with the Apaches, would be predominately fixed-wing aircraft, not ground maneuver forces.

Summary

In the end, Task Force Hawk was never called upon to perform the mission it had so diligently trained for. Operation Allied Force ceased offensive operations 24 June 1999 without the Apaches firing a shot. Pundits argue that the task force was a failure because the Apaches were not used in combat--I disagree. Tactically, the fact is, they did pose a significant threat that the Serb

forces had to honor. One can only speculate as to the task force's success if called into combat, but the pilots and planners all agree that they were far better prepared than most people thought and the press gave them credit for.

Operationally, the fundamental lesson for the Task Force is that although there is a doctrinal foundation for operating in an air-only war, there is a lack of TTPs to guide the crews. Furthermore, there also exists a rift in Army leadership over the issues of command and control of aviation assets and their inclusion onto an ATO.⁴⁶ Although unity of command is discussed throughout seemingly every Army field manual and joint publication, many Army commanders, because of their tactical focus, are leery of releasing the attack helicopters to a JFACC/CFACC. Because of this unfamiliarity with the systems in place to facilitate the safe and synergistic application of airpower, the potential exists to place more aircraft at risk, not less.

¹Sean D. Naylor, "Tomorrow's Tank," *Army Times*, (5 August 1991), 24.

²Busico, Major Roger P. Battlefield Air Interdiction: Airpower for the Future. M.M.A.S. Thesis. (Fort Leavenworth, KS; Army Command and General Staff College, 1980), 38.

³General Wesley K. Clark, Supreme Allied Commander Europe, December 7, 1999 . Speech given to the students of the U.S. Army Command and General Staff College, Ft. Leavenworth, KS.

⁴Ibid.

⁵Ibid.

⁶Lieutenant General Michael C. Short, 16AF/CC, Combined Air Forces Commander, Operation Allied Force, September 9, 1999. Speech given to the students of the U.S. Army Command and General Staff College, Fort Leavenworth, KS.

⁷General Clark Speech.

⁸Personal notes of author.

⁹Ibid.

¹⁰Personal records of author.

¹¹Ibid.

¹²Interview by author with Major John Quackenbush, who was a planner for Task Force Hawk in Albania.

¹³Ibid.

¹⁴Ibid.

¹⁵Ibid.

¹⁶Personal records of author.

¹⁷The update process is theater specific.

¹⁸Quackenbush interview.

¹⁹Ibid.

²⁰Ibid.

²¹FM 1-112.

²²Elaine M. Grossman, "USAF Officers Depict Approach To Apache Ops As Potentially Dangerous," *Inside the Pentagon*, 20 May 1999, 1.

²³Ibid.

²⁴Ibid.

²⁵Ibid.

²⁶Erin Q. Winograd, "Next Vice Chief Argues Aviation Assets Must Be Put Under Joint Control," *Inside The Army* (May 17, 1999), 1.

²⁷Ibid.

²⁸Ibid.

²⁹Ibid.

³⁰Mark H. Kagan, "Great Expectations, Dismal Results," *Military Training Technology*, (volume 4, issue 5, 1999), 12.

³¹Ibid.

³²Ibid.

³³Ibid., 13.

³⁴See FM 1-112 for a description of the attack profiles and the doctrinal solution to prevention of enemy engagements.

³⁵Kagan, 13. However, Major Quackenbush noted that he personally felt the unit was amply confident and aware of the air force capabilities to provide J-SEAD. Additionally, they felt the MLRSs and Paladins would provide the necessary "cross-flot" fires should they be needed (ROE permitting, of course).

³⁶Quackenbush interview. Although the pool of pilots came from both Germany and Fort Bragg North Carolina, their predeployment training was comparable. Of course, once they arrived in Albania all pilots received the same type of training.

³⁷Ibid.

³⁸Ibid.

³⁹Ibid.

⁴⁰Ibid.

⁴¹Ibid.

⁴²Ibid.

⁴³Major General Richard C. Cody, Deputy Commanding General, Task Force Hawk, April 7, 2000. Speech given to the Aviation officers of the U.S. Army Command and General Staff College, Fort Leavenworth, KS.

⁴⁴MAJ Quackenbush interview.

⁴⁵*Ibid.*

⁴⁶MG General Cody interview.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

There are no new ideas, but there's certainly some that we collectively haven't thought about. So never hesitate to come forward if you have a suggestion.

Lieutenant General Charles A. Horner

Primary Recommendations

The purpose of this study was to determine if there exists sufficient Joint doctrinal foundation for the Apache's employment during Operation Allied Force. Secondary, but no less important, was to determine if Army doctrine nested with Joint doctrine in this respect. Finally, assuming there will be further "air-only" operations, do the benefits of inclusion of attack helicopters outweigh the risks?

My research shows that there exists sufficient Joint doctrine to support the employment of Army attack aviation in an air-only operation. Furthermore, there also exists sufficient operational level Army doctrine for their inclusion however, there is a clear lack of tactical level doctrine, in the form of TTPs, to provide the guidance needed to the commanders and crews. Moreover, there is an issue of command and control of the assets once the joint force commander has operational control of those assets. Joint doctrine and Army doctrine view this command and control issue differently. Finally, I believe the capabilities of the attack helicopters certainly warrant their inclusion into any campaign plan, air-only or phased air and land campaign. Attack helicopters provide the Joint Force Air Component Commander (JFACC) with operational flexibility and a psychological advantage. The weapons are lethal and numerous, providing a

wide range of employment options to the commander. That said, it is important to point out that they also represent a significant portion of the combat capability for a Joint Force Land Component Commander (JFLCC). Their support of traditional air superiority operations in a phased air and land campaign must be undertaken with great care. As pointed out in an earlier chapter, even the loss of a single Apache can have serious effects on the ground commander's scheme of maneuver and fire support.

Nesting Doctrine

Although there exists a doctrinal foundation for Task Force Hawk and Operation Allied Force, there are several disconnects between Joint doctrine and Army doctrine in implementing the strategy. First, the issue of command and control of the assets is at odds between the respective doctrine. Second, within the context of conducting air attacks, joint lexicon is completely different than Army lexicon.

Many times command relationships are a contentious issue within a service, establishing command relationships between different services and specific assets is an even trickier task. Operation Allied Force is a case in point. Although JP 3-56.1 stresses the need for integration of air assets under the ATO umbrella and planned under the Joint Air Operations Plan, without tasking authority and clear command lines established, integration is piecemeal and without synergy. It is the responsibility of the Joint Force Commander to establish the command relationships, with JP 3-0 giving some basic guidance on command relationships. However Army doctrine, with respect to attack aviation,

differs in the command relationship interpretation. It is clear that there needs to be either, further modification in Joint doctrine with respect to assets supporting air operations, or further refinements in Army doctrine to allow for JFACC tasking authority of attack helicopters during air operations. As a short-term solution to this dilemma, a tactical control option, similar to that which exists between the Air Force and the Marine Corps, could serve as a model for the relationship. This model allows the JFACC to task "excess sorties" that the Marine commander will not use, thus allowing the ground commander to retain operational control of the attack helicopters and choose the level of support to the air operation.

In describing the various missions involved in air operations the lexicon to describe the missions are different between the Joint and Army doctrine. Joint doctrine describes the various operations in terms of effects, Strategic Attack, Offensive Counter Air, Interdiction, and Close Air Support (CAS). Except for CAS, there is little discussion on relationship with ground forces. Army doctrine, on the other hand, discusses the battlefield in terms of close, deep and rear operations and the shaping of the area of operation for the ground commander. Although certainly not a "show-stopper" to integration, it does present confusion for planners and crews alike. The solution is in the tactical level doctrine (TTPs). TTPs provide the guidance for the crews and could also be the forum to discuss missions in terms of effects achieved toward the JFC's overall objectives. This long-term solution could either be in the form of a new TTP addressing air-only operations or rewriting the existing TTPs to include detailed integration guidance

and support aircraft capabilities. This information is critical to the crews and the commanders as they plan and lead the attack aviation battalions.

Finally, participation in Air Force tactical exercises will provide familiarization with the concepts and terms used in air operations. An additional benefit is that the JFACC and other AOC staff organizations, become familiar with the attack helicopter's needs. The requirements for the helicopters in terms of air superiority is vastly different. The JFACC can diminish the effects of small arms, anti-aircraft artillery, and many surface-to-air missiles by creating an altitude floor that fixed-wing aircraft do not penetrate. The JFC and JFACC do not have this option when helicopters fly. Therefore, the J-SEAD requirements increase substantially for strike packages that include helicopters. This has a ripple effect to other strike packages and ultimately to the JFACC being able to achieve the JFC's objectives.

Training for the Future

Currently, there is little to no training by the attack helicopter units for missions independent of ground maneuver units. The reasons are two-fold; first, training funds are based on mission requirements. However, there are few mission requirements for operations independent of ground forces. This is certainly understandable given the fact that, short of Desert Storm, attack helicopters had not operated as part of an air only offensive. Therefore, money is not allocated for these types of operations. Unfortunately, this lack of Army funding places the burden upon the individual units to prepare for the possibility of missions independent of ground maneuver forces without the needed

resources. This lack of preparation leads to delayed response by the units as they learn capabilities in theater or worse yet, in combat.

The second area is time (in flying hours to the pilots and the units). As was mentioned earlier, integrated air operations are tremendously complicated. Without constant practice, skills atrophy quickly. Attack helicopter units (as with funding) do not have the time to train for missions other than those required to meet unit taskings. Again, this places the burden upon the units to practice a mission that has no guidance in tactical level doctrine and takes training time from those missions that are required, however, units are doing just that.

Colonel James W. Ewing, 8th Air Force Director of Operations, stated that during ROVING SANDS 2000 (A joint Army, Navy, and Air Force exercise that begins June 2000), the XVIII Airborne Corps has agreed to TACON its attack helicopters to the JFACC for tasking prior to their use by the ground maneuver commanders.¹ The 8AF is the organization that will assume the role of the air operations center for ROVING SANDS. Moreover, Colonel Ewing stated that the Corps planners were eager to learn about the capabilities of the air operations center and the nuances of air taskings.² Additionally, because formal command relationship are established (attack helicopters TACON'd to the supported commander [the JFACC] for the air superiority phase), conflicts shouldn't arise concerning tasking authority.³

A final area for consideration is in commanders' education, both air and ground commanders. This process should begin early in an officer's career at their respective intermediate service schools. This early joint training fosters

understanding of service capabilities and decreases institutional proclivities. As the supported commander for achieving the air objectives, the JFACC also must have an adequate understanding of the complexities of attack helicopter aviation. Assigning attack aviation battalions to organizational-level exercises that test decision-making processes, is another tool for the JFACC to become comfortable with the requirements for helicopter integration. Finally, as pointed out by Major General Cody, the Army and Air Force should look for ways to integrate and synchronize its attack aviation and “embrace the ATO” rather than ignoring its benefits.⁴

Equipment

Once the doctrine and education hurdles are addressed, the equipment differences must be looked at.

The major area is in the communication suite. In order for the Apaches to maximize both the capabilities of an entire support package and integrate with the remaining strikers, they must have secure and/or frequency hopping radios. Additionally, the days of flying radio-silenced are gone. Technology has allowed rapid dissemination of information from the AOC to the strike packages. This information can be threat updates, targeting changes, or support package changes. All of this information is critical to not only mission accomplishment, but also, many times, aircraft survival. Flying and attacking targets in today's threat array is a risky proposition on the best days, to do it radio silent is ludicrous.

Nuances of the Tasking

Before US Army attack helicopters are integrated effectively into air operations, many institutional hurdles must be overcome. This study does not attempt to compare Task Force Hawk to past contingencies. It is neither realistic nor possible to compare the tasked mission with other preceding operations-- Operation Allied Force was distinctly different. The primary purpose is to better prepare the joint force for future contingencies. With Army support confined to areas in and around Tirana, Albania with very little ability to rapidly relocate to provide supporting fires, Apaches would have had to rely heavily on the air forces to provide J-SEAD. To worsen matters, highly mobile SAMs and AAA pose the greatest threat to the helicopters, thus making the J-SEAD and support task infinitely harder. All of these activities require constant attention and demand day-to-day improvements to increase the effectiveness of the fighting force.

Further Study

The subject of attack helicopters in joint air operations is certainly worthy of further study. I have only scratched the surface of the myriad of issues and topics that must be addressed.

Certainly one area that must be covered is the question of flying hours for the pilots. How much is enough? Are Red Flags the answer, or can a more robust NTC (from the standpoint of air assets) fit the requirement?

Additionally, a study of the deep operations coordination cell and BCD is warranted. As integration becomes more commonplace, are the structures robust enough and are there activities that are better suited elsewhere?

Another topic worthy of discussion is whether each attack helicopter battalion must have this specific training. Perhaps a model similar to the U. S. Air Force F-16 squadrons could be applied, where certain units have specific missions based on platform capabilities. This would alleviate some of the tension within the Army ranks and allow for specialized training for earmarked units.

Conclusion

In conclusion, composite air operations are more than simply receiving taskings, meeting at a rendezvous point, and striking an assigned target. Composite force effectiveness depends upon coordination like that practiced at Red Flag and during the USAF Weapons School mission employment exercise. In order to take advantage of synergy, responsiveness, and agility all forces must have a common reference point from which to embark.

¹Interview by author with Colonel James W. Ewing, 9 April 2000.

²Ibid.

³Ibid.

⁴Major General Cody interview.

BIBLIOGRAPHY

Articles and Periodicals

- Atkinson, David and Hunter Keeter. "Apache Role in Kosovo Illustrates Cracks in Joint Doctrine." *Defense Daily*, 26 May 1999, 6.
- Bender, Bryan. "Flight Delay." *The New Republic* 10 May 1999, 14-17.
- Brady, Roger A. "Building and Commanding Expeditionary Units: Lessons from Kosovo." *Aerospace Power Journal*, Winter 2000, 12-21.
- Burke, COL Charles M. and Capt Donald C. Presgraves. "U.S. Army operational concept for Aviation." *U.S. Army Aviation Digest* no. 5, September-October 1993, 7-13.
- Carter William R. "Air Power in the Battle of the Bulge: A Theater Campaign Perspective." *Air Chronicles*, Winter 1989. 12-21.
- Clodfelter Mark. "Of Demons, Storms, and Thunder A Preliminary Look at Vietnam's Impact on the Persian Gulf Air Campaign." *Airpower Journal*, Winter 1991, 17-32.
- Eflein, Dawn R. "A Case Study of Rules of Engagement in Joint Operations: The Air Force Shootdown of Army Helicopters in Operation Provide Comfort." *The Air Force Law Review*, 1998, 33-74.
- Fedorchak, Scott A. "Air Operations Must be Joint." *Airpower Journal*, Spring, 1995, 79-87.
- Ferriter, Capt Edward C. "Which Way Joint Doctrine?" *Joint Force Quarterly* no.8, Summer 1995, 118-119.
- Furr, LtCol William F. "Joint Doctrine--Progress, Prospects, and Problems." *Airpower Journal* vol. 5, no.3, Fall 1991, 36-45.
- Grossman, Elaine M. "USAF Officers Depict Approach To Apache Ops As Potentially Dangerous." *Inside the Pentagon*, 20 May 1999, 1.
- Hollis, Patricia S. "Making the most of Air Power." *Field Artillery*, September-October 1996, 3-5.
- Jones, David C. "Past Organizational Problems." *Joint Force Quarterly*, Autumn 1996, 23-28.

- Kagan, Mark H. "Great Expectations, Dismal Results." *Military Training Technology*, vol 4, Issue 5, 1999, 10-13.
- Kropf, Roger F. "The US Air Force in Korea: Problems that Hindered the Effectiveness of Airpower." *Airpower Journal*, Spring 1990, 30-46.
- Lewis, Richard B. H. "JFACC Problems Associated With Battlefield Preparation In Desert Storm." *Airpower Journal*, Spring 1994, 4-21.
- Locher, James R. III. "Taking Stock of Goldwater-Nichols." *Joint Forces Quarterly* no.13, Autumn 1996, 10-16.
- Naylor, Sean D. "Tomorrow's Tank," *Army Times*, 5 August 1991, 24.
- Newman, Richard J. "Why did it take so long to send the Apaches?" *U.S. News and World Report*, 3 May 1999, 34.
- Prueher, Admiral Joseph W. "Rethinking the Joint Doctrine Hierarchy." *Joint Force Quarterly*, no.14, Winter 1996-1997, 42-45.
- Redden, LtGen Joseph J. "Joint Doctrine: The Way Ahead." *Joint Force Quarterly* no. 14, Summer 1998, 54-56.
- Reimer, Dennis J. and Ronald R. Fogelman. "Aerospace Doctrine More than Just a Theory." *Joint Force Quarterly*, Spring, 1996, 9-14.
- Robinson, David J. "Army Aviation's role in the future defined through Battle Labs." *U.S. Army Aviation Digest*, November-December 1992, 1-3.
- Snider, Dr. Don M. "The US Military in Transition to Jointness Surmounting Old Notions of Interservice Rivalry." *Airpower Journal*, Fall 1996, 16-27.
- Tipton, Frank J. "Digitizing BCDs." *Field Artillery*, March/April 1998, 18-19.
- Utley, Douglas E. "The Area of Operations-Fighting One Campaign." *Joint Force Quarterly*, Autumn, Winter 1998-1999, 34-39.
- Winograd, Erin Q. "Next Vice Chief Argues Aviation Assets Must Be Put Under Joint Control." *Inside The Army*, 17 May 1999, 1.
- Winfield, James A. and Dana J. Johnson. "Unity of Control: Joint Air Operations in the Gulf." *Joint Force Quarterly*, Summer, 1993, 88-99.

Government Documents

Air Land Sea Application Center. *JAAT Multiservice Procedures for Joint Air Attack Team Operations*. Langley Air Force Base, VA.: GPO, June 1998.

_____. *TAGS Multiservice Procedures for the Theater Air-Ground System*. Langley Air Force Base, VA.: GPO, July 1998.

CALL Combined Arms Assessment Team. *Attack Helicopter Operations During the Division AWE*. Fort Leavenworth, KS: Center for Army Lessons Learned (CALL), February 1998.

CALL Combined Arms Assessment Team. *NTC Trends Compendium*. Fort Leavenworth, KS: Center for Army Lessons Learned (CALL), No.99-1, January 1999.

Goldwater-Nichols Department of Defense Reorganization Act of 1986, Public Law 99-433, 1 October, sec. 201, para.153 (a) (5).

Office of the Chairman of the Joint Chiefs of Staff. JP 1-01c1, *Joint Publication System Joint doctrine and Joint tactics, Techniques, and Procedures Development Program*. Change 1; Washington DC: GPO, 14 September 1993.

_____. JP 1-2, *DOD Dictionary of Military and Associated Terms*. Washington, DC: GPO, 29 June 1999.

_____. JP 3-0, *Doctrine For Joint Operations*. Washington, DC: GPO, 1 February 1995.

_____. JP 3-01.4 *JTTP For Joint Supresion of Enemy Air Defenses*. Washington, DC: GPO, 25 July 1995.

_____. JP 3-03, *Doctrine For Joint Interdiction Operations*. Washington, DC: GPO, 10 April 1995.

_____. JP 3-09.3, *Joint Tactics, Techniques, And Procedures For Close Air Support (CAS)* Washington, DC: GPO, 1 December 1995.

_____. JP 3-56.1, *Command And Control For Joint Air Operations*. Washington, DC: GPO, 1 February 1995.

_____. JP 5-0, *Doctrine For Planning Joint Operations*. Washington, DC: GPO, 13 April 1995.

Senate Committee on the Armed Services. *Defense Organization: The Need For Change*, 99th Congressional, 1st session, Committee Print (S. Prt. 99-86), 16 October 1985, 163-65.

U.S. Army. FM 100-5, *Operations*. Washington, DC: Department of the Army, 1996.

_____. FM 1-100, *Army Aviation in Combat Operations*. Washington, DC: Department of the Army, February 1997.

_____. FM 1-111, *Aviation Brigades*. Washington, DC: Department of the Army, 27 October 1997.

_____. FM 1-112, *Attack Helicopter Operations*. Washington, DC: Department of the Army, April 1997.

_____. TC 1-214, *Aircrew Training Manual, Attack Helicopter, AH-64*, Washington, DC: Department of the Army, May 1992.

United States General Accounting Office. "Combat Air Power: Joint Mission Assessments Needed Before Making Program and Budget Decisions." Testimony before the Subcommittee on Military Research and Development and Military Procurement, Committee on National Security, House of Representatives. 27 June 1999.

Theses and Research Reports

Busico, Roger P. "Battlefield Air Interdiction: Airpower for the Future." Master of Military Art and Science thesis, U.S. Army Command and General Staff College, Ft. Leavenworth KS., 1980.

Eshelman, Mark J. "Air Commander Control of Army Deep Fire assets." Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Ft. Leavenworth KS., 1993.

Hanson, John T. "Role of Attack Helicopters in Operations Other than War." Master of Military Art and Science thesis, U.S. Army Command and General Staff College, Ft. Leavenworth KS., 1995.

Lewis, Michael. "LT GEN Ned Almond, USA. A Ground Commander's Conflicting View with Airmen over CAS Doctrine and Employment." Thesis, School for Advanced Aerospace Studies, Maxwell Air Force Base AL., 1997.

Moeller, Michael R. "The Relationship Between the Joint Targeting Coordination Board and the Joint Force Commander." Thesis, School for Advanced Aerospace Studies, Maxwell Air Force Base, AL., 1994.

Smith, Stephan C. "Is There a Role for Attack Helicopters in Peace Operations?" Master of Military Art and Science theses, U.S. Army Command and General Staff College, Ft. Leavenworth KS., 1998.

Tillotson, David III. "Restructuring the Air Operations Center." Research Report No. AU-ARI-92-1, Maxwell Air Force Base, AL.: Air University Press, 1993.

Personal Interview

Ewing, James W. Colonel, Commander 608th Air Operations Group, Barksdale Air Force Base, LA. Telephone interview by author, 4 October 1999, Fort Leavenworth, KS., U.S. Army Command and General Staff College.

Quackenbush, John, Major. Telephone interview by author 10 April 2000

Quackenbush, Robert, Major, CGSC student. Interview by author, 6 October 1999, Fort Leavenworth KS., U.S. Army Command and General Staff College.

Books

Andrews, William F. *AirPower Against an Army Challenge and Response in CENTAF's Duel with the Republican Guard*. Maxwell Air Force Base, AL.: Air University Press, 1998.

Cardwell, Thomas A. III. *Command Structure for Theater Warfare. The Quest for Unity of Command*. Maxwell Air Force Base, AL.: Air University Press, September 1984.

Futrell, Robert F. *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force*, vol. 2, 1961-1984. Maxwell Air Force Base, AL.: Air University Press, 1984

Gordon, Michael R. and Bernard E. Trainor. *The GENERALS' WAR The Inside Story of the Conflict in the Gulf*. New York, NY: Little Brown and Company, 1995.

Kohn, Richard H. and Joseph P. Harahan, *Air Superiority in World War II and Korea*. Washington, DC: Office of Air Force History, 1983.

- Leaf, Daniel P. *Unity of Command and Interdiction*. Maxwell Air Force Base, AL.: Air University Press, July 1994.
- McNamara, Stephen J. *Air Power's Gordian Knot. Centralized Versus Organic Control*. Maxwell Air Force Base, AL.: Air University Press, August 1994.
- Momyer, William W. *Airpower in Three Wars*. Washington DC: Department of the Air Force, 1978.
- Mrozek, Donald J. *Air Power and the Ground War in Vietnam Ideas and Actions*. Maxwell Air Force Base, AL.: Air University Press, January 1988.
- Pivarsky, Carl R. Jr. *Airpower in the Context of a Dysfunctional Joint Doctrine*. Maxwell Air Force Base, AL.: Air University Press, 1997.
- Sbrega, John J. *Southeast Asia*. edited by Benjamin Franklin Coolong. *Case Studies in the Development of Close Air Support*. Washington DC: Office of Air Force History, 1990.
- Tilford, Earl H. JR. *SETUP: What the Air Force Did in Vietnam and Why*. Maxwell Air Force Base, AL.: Air University Press, 1991.
- Warden, John A. *The Air Campaign: Planning for Combat*. Washington DC: National Defense University Press, 1988.
- Speeches
- General Wesley K. Clark, Supreme Allied Commander Europe, December 7, 1999. Speech given to the students of the US Army Command and General Staff College, Ft Leavenworth, KS.
- Major General Richard C. Cody, Deputy Commanding General, Task Force Hawk, April 7, 2000. Speech given to the Aviation officers of the US Army Command and General Staff College, Ft Leavenworth, KS.
- Lieutenant General Michael C. Short, 16AF/CC, Combined Air Forces Commander, Operation Allied Force, September 9, 1999. Speech given to the U.S. Air Force students of the US Army Command and General Staff College, Ft Leavenworth, KS.

DISTRIBUTION LIST

1. Combined Arms Research Library
U.S. Army Command and General Staff College
250 Gibbon Ave
Fort Leavenworth, KS 66027-2314
2. Defense Technical Information Center/OCA
8725 John J. Kingman Rd., Suite 944
Fort Belvoir, VA 22060-6218
3. LTC Carl E. Fischer
Department of Joint and Multi-National Operations
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352
4. COL Raymond O. Knox
USAF Element
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352
5. Dr. Arthur T. Frame
Department of Joint and Multi-National Operations
USACGSC
1 Reynolds Ave.
Fort Leavenworth, KS 66027-1352

CERTIFICATION FOR MMAS DISTRIBUTION STATEMENT

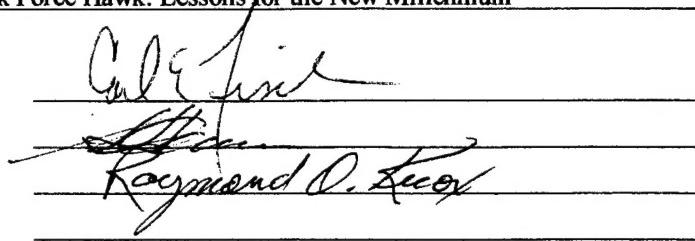
1. Certification Date: 2 June 2000

2. Thesis Author: Peter L. Van Deusen, MAJ, USAF

3. Thesis Title: Joint Doctrine and Task Force Hawk: Lessons for the New Millennium

4. Thesis Committee Members

Signatures:



5. Distribution Statement: See distribution statements A-X on reverse, then circle appropriate distribution statement letter code below:

A B C D E F X

SEE EXPLANATION OF CODES ON REVERSE

If your thesis does not fit into any of the above categories or is classified, you must coordinate with the classified section at CARL.

6. Justification: Justification is required for any distribution other than described in Distribution Statement A. All or part of a thesis may justify distribution limitation. See limitation justification statements 1-10 on reverse, then list, below, the statement(s) that applies (apply) to your thesis and corresponding chapters/sections and pages. Follow sample format shown below:

EXAMPLE

<u>Limitation Justification Statement</u>	/	<u>Chapter/Section</u>	/	<u>Page(s)</u>
<u>Direct Military Support (10)</u>	/	<u>Chapter 3</u>	/	<u>12</u>
<u>Critical Technology (3)</u>	/	<u>Section 4</u>	/	<u>31</u>
<u>Administrative Operational Use (7)</u>	/	<u>Chapter 2</u>	/	<u>13-32</u>

Fill in limitation justification for your thesis below:

<u>Limitation Justification Statement</u>	/	<u>Chapter/Section</u>	/	<u>Page(s)</u>
	/		/	
	/		/	
	/		/	
	/		/	

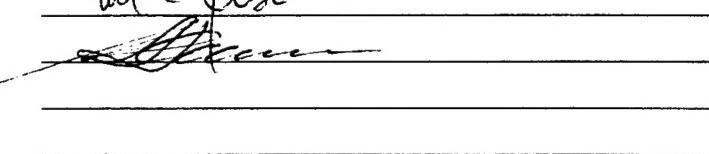
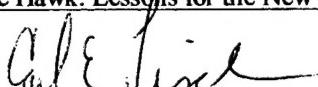
7. MMAS Thesis Author's Signature: 

CERTIFICATION FOR MMAS DISTRIBUTION STATEMENT

1. Certification Date: 2 June 2000
2. Thesis Author: Peter L. Van Deusen, MAJ, USAF
3. Thesis Title: Joint Doctrine and Task Force Hawk: Lessons for the New Millennium

4. Thesis Committee Members

Signatures:



5. Distribution Statement: See distribution statements A-X on reverse, then circle appropriate distribution statement letter code below:

A B C D E F X

SEE EXPLANATION OF CODES ON REVERSE

If your thesis does not fit into any of the above categories or is classified, you must coordinate with the classified section at CARL.

6. Justification: Justification is required for any distribution other than described in Distribution Statement A. All or part of a thesis may justify distribution limitation. See limitation justification statements 1-10 on reverse, then list, below, the statement(s) that applies (apply) to your thesis and corresponding chapters/sections and pages. Follow sample format shown below:

EXAMPLE

<u>Limitation Justification Statement</u>	/	<u>Chapter/Section</u>	/	<u>Page(s)</u>
<u>Direct Military Support (10)</u>	/	<u>Chapter 3</u>	/	<u>12</u>
<u>Critical Technology (3)</u>	/	<u>Section 4</u>	/	<u>31</u>
<u>Administrative Operational Use (7)</u>	/	<u>Chapter 2</u>	/	<u>13-32</u>

Fill in limitation justification for your thesis below:

<u>Limitation Justification Statement</u>	/	<u>Chapter/Section</u>	/	<u>Page(s)</u>
	/		/	
	/		/	
	/		/	
	/		/	
	/		/	

7. MMAS Thesis Author's Signature: 